QUESTION AND ANSWER

FOR

JUNE 2018

DIPLOMA IN ACCOUNTANCY

PAPERS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   Section A: One (1) Compulsory question.
   Section B: Five (5) Optional Questions. Attempt any Four (4) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. Cell Phones are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – (COMPULSORY)

Attempt all ten (10) multiple choice questions.

QUESTION ONE

1.1 The main aim of accounting is to:
   A. Provide financial information to users of such information.
   B. Record every financial transaction individually.
   C. Maintain ledger accounts for every transaction.
   D. Post business transactions in order to produce a trial balance.
   (2 marks)

1.2 The “accounting equation” can be rewritten as:
   A. Capital at the start of the accounting period plus profit less drawings less liabilities equals assets.
   B. Assets less liabilities less capital at the start of the accounting period plus drawings equals profit
   C. Assets plus profit less drawings less liabilities equals capital at the end of the accounting period.
   D. Assets less liabilities less drawings equals capital at the start of the accounting period plus profit.
   (2 marks)

1.3 The double entry system of bookkeeping normally results in which of the following balances in the ledger accounts?

<table>
<thead>
<tr>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Assets and Income</td>
<td>Liabilities, capital and expenses</td>
</tr>
<tr>
<td>B. Income capital and liabilities</td>
<td>Assets and expenses</td>
</tr>
<tr>
<td>C. Assets and expenses</td>
<td>Liabilities, capital and income</td>
</tr>
<tr>
<td>D. Assets, expenses and capital</td>
<td>Liabilities and income</td>
</tr>
</tbody>
</table>
   (2 marks)

1.4 The most appropriate definition of depreciation is:
   A. A means of estimating the benefit from the use of a non-current asset.
   B. A means of setting funds aside for the replacement of the non-current asset.
   C. A means of determining the decrease in fair value of a non-current asset.
   D. A means of allocating the cost of a non-current asset over its economic life.
   (2 marks)
1.5 A business entity buys an item of machinery for long-term use. Which of the following is **not** capital expenditure?

A. The purchase price of K10 000  
B. Delivery fees of K1 250  
C. K3 500 spent on training employee to use the machine  
D. K5 000 incurred testing the machine  

(2 marks)

1.6 DCM owns and operates a successful fruit drink business since 2008. His financial year ends on 31 December each year. In 2010, the business grew and bought the following assets:

- A Van for deliveries at a cost of K18 000 was purchase on 1 June 2010.  
- A new fruit mixer was purchased at a cost of K2 000 on 1 December 2010.

DCM depreciates the fruit mixer at 10% straight line and the delivery van at 25% reducing balance. A full year's depreciation is charged in the year of purchase and none in the year of disposal. What was the total depreciation charge for the year ended 31 December 2012? Your answer to nearest K1.

A. K2 700  
B. K2 731  
C. K2 531  
D. K4 231  

(2 marks)

1.7 C Limited has not yet accounted for a cash discount received of K1 500. When the correct accounting entries have been made, which one of the following statements is correct?

A. Gross profit will be unaffected but net profit will increase by K1 500.  
B. Gross profit will be unaffected but net profit will decrease by K1 500.  
C. Gross profit and net profit will increase by K1 500.  
D. Gross profit and net profit will decrease by K1 500.  

(2 marks)

1.8 If a purchase return of K480 has been wrongly posted to the debit side of the sales returns account, but has been correctly entered in the payables control account. What would the total of the trial balance show?

A. The credit to be K480 more than the debit side.  
B. The debit side to be K480 more than the credit side.  
C. The credit side to be K960 more than the debit side.  
D. The debit side to be K960 more than the credit side.  

(2 marks)
1.9 At 31 March 2018, G limited had a receivables balance of K50 000 and an allowance for receivables of K800. Following a review of receivables, G Limited wishes to write off an irrecoverable debt of K1 000 and adjust their receivables allowance to K2 450.

What will be the charges to the statement of profit or loss for the year ended 31 March 2018?

A. K1 000
B. K2 650
C. K2 450
D. K3 450

(2 marks)

1.10 A business entity made an operating profit before tax of K8 000 but its bank balance has fallen by K5 000. This could be due to:

A. Depreciation of K6 000 and the repayment of a loan of K7 000.
B. The disposal of a non-current asset for K13 000 less than its carrying value.
C. Depreciation of K12 000 and the purchase of new non-current asset by cheque for K25 000.
D. Depreciation of K3 000 and an increase in inventories of K10 000.

(2 marks)

[Total: 20 Marks]
SECTION B

There are five (5) questions in this section. Attempt any four (4) questions.

QUESTION TWO

Sakala and Moono are trading in Partnership, sharing profits and losses equally. Interest at 5% per annum is allowed or charged on both the capital accounts and the current account balances at the beginning of the year.

The partners are entitled to annual salaries of:

Sakala  K24 000
Moono   K16 000

Sakala and Moono’s trial balance as at 30 June 2017.

<table>
<thead>
<tr>
<th>Details</th>
<th>Dr K</th>
<th>Cr K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital accounts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakala</td>
<td>200 000</td>
<td></td>
</tr>
<tr>
<td>Moono</td>
<td>100 000</td>
<td></td>
</tr>
<tr>
<td>Current accounts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakala</td>
<td>4 000</td>
<td></td>
</tr>
<tr>
<td>Moono</td>
<td>1 200</td>
<td></td>
</tr>
<tr>
<td>Cash drawings for the year:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sakala</td>
<td>30 000</td>
<td></td>
</tr>
<tr>
<td>Moono</td>
<td>20 000</td>
<td></td>
</tr>
<tr>
<td>Freehold premises at cost</td>
<td>100 000</td>
<td></td>
</tr>
<tr>
<td>Inventory at 1st July 2016</td>
<td>150 000</td>
<td></td>
</tr>
<tr>
<td>Fixture and fittings at cost</td>
<td>30 000</td>
<td></td>
</tr>
<tr>
<td>Purchases and purchases returns</td>
<td>760 000</td>
<td>24 000</td>
</tr>
<tr>
<td>Bank</td>
<td>63 200</td>
<td></td>
</tr>
<tr>
<td>Sales and sales returns</td>
<td>12 000</td>
<td>1 016 000</td>
</tr>
<tr>
<td>Accounts receivables and accounts payables</td>
<td>104 800</td>
<td>66 600</td>
</tr>
<tr>
<td>Carriage Inwards</td>
<td>43 000</td>
<td></td>
</tr>
<tr>
<td>Carriage outwards</td>
<td>6 000</td>
<td></td>
</tr>
<tr>
<td>Staff salaries</td>
<td>84 000</td>
<td></td>
</tr>
<tr>
<td>VAT</td>
<td></td>
<td>17 400</td>
</tr>
<tr>
<td>Office expense</td>
<td>15 000</td>
<td></td>
</tr>
<tr>
<td>Allowance for irrecoverable</td>
<td></td>
<td>4 000</td>
</tr>
<tr>
<td>Advertising</td>
<td>10 000</td>
<td></td>
</tr>
<tr>
<td>Discount received</td>
<td></td>
<td>2 000</td>
</tr>
<tr>
<td>Discount allowed</td>
<td>2 400</td>
<td></td>
</tr>
<tr>
<td>Irrecoverable receivables</td>
<td>2 800</td>
<td></td>
</tr>
<tr>
<td>Rent and business rates</td>
<td>5 600</td>
<td></td>
</tr>
<tr>
<td>Allowance for depreciation on fixtures and fittings</td>
<td>6 000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 440 000</td>
<td>1 440 000</td>
</tr>
</tbody>
</table>
You are given the following additional information as at 30 June 2017:

(a) Inventory was valued at K136 000.

(b) Purchase invoices amounting to K6 000 for goods included in the Inventory valuation in (a) above had not been recorded.

(c) Staff salaries owing K1 800

(d) Business rates paid in advance K400

(e) Allowance for irrecoverable receivables to be increased to K4 800.

(f) Goods withdrawn by partners for private use had not been recorded and were valued at:
   - Sakala K1 000
   - Moono K1 260
   No interest is to be charged on these amounts.

(g) Allowance is to be made for depreciation of fixtures and fittings at 10% on cost.

(h) Interest on drawings for the year is to be charged: Sakala K720
    Moono K560

**Required:**

From the information given above:

(i) Prepare the partnership statement of Profit or loss for the year ended 30 June 2017. (10 marks)

(ii) The appropriation account for the year ending 30 June 2017. (4 marks)

(iii) The Partnership current accounts. (6 marks)

[Total: 20 Marks]
QUESTION THREE

(a) Explain the uses of any four (4) main books of prime entry. (8 marks)

(b) Haven Ltd Company’s bank column of the cash book on 31 March 2017 showed a positive balance of K500,000 while upon receipt of its bank statement, the statement showed a positive balance of K400,000.

Upon investigation as to what could have led to the difference in the balances, the following issues were discovered:

1) A positive opening balance brought down in the cash book on 1 March 2017 should have been indicated as K40,000 instead of K50,000.

2) Dividends received from Nana Ltd Company amounting to K80,000 were paid direct into the bank but no corresponding entry was made in the cash book.

3) Bank charges of K5,000 were reflected on the bank statement but no entry had been made in the cash book.

4) A cheque drawn amounting to K10,000 had been entered in the cash book but no entry was made on the bank statement as it was not presented for payment at the bank.

5) A payment for rent amounting to K10,000 was entered on the receipt side of the cash book instead of the payment side.

6) A standing order relating to company’s water bill of K20,000 was entered on the bank statement but no entry was made in the cash book.

7) Cheques received from B Banda and C Kalaba totaling K127,000 were recorded in the cash book and paid into the bank, however this amount was not credited by the bank until 2nd April.

8) A cheque amounting to K8,000 was entered twice on the receipt side of the cash book.

Required:

(i) Prepare Haven’s Ltd Company revised cash book. (8 marks)

(ii) Prepare a bank reconciliation statement for 31 March 2017 starting with balance as per revised cash book. (4 marks)

[Total: 20 marks]
QUESTION FOUR

Malina is a sole trader who has been in business for the past 10 years dealing with assorted goods. He runs the business with friends with whom he shares management responsibilities as well as operational roles. The business has expanded rapidly over the past years and this has sometimes posed a challenge to the business as more funds are sometimes needed for operations. The other problem is that the organisation is currently using a manual system which has been failing due to an increase in paperwork. Malina called a management meeting of which he shared to others that he was thinking of converting the business to a private company. He also highlighted to them that he has engaged a consultant to help in the installation of computerized accounting packages.

Required:

(a) Explain five (5) advantages of converting a business from a sole trader to a private limited company. (10 marks)

(b) State five (5) advantages of computerized accounting packages. (5 marks)

(c) List five (5) disadvantages of computerized accounting packages. (5 marks)

[Total: 20 marks]

QUESTION FIVE

(a) The trial balance extracted from V. Sampa, a sole trader, as at 31 December 2017 was as follows:

V. Sampa’s

Trail Balance as at 31 December 2017

<table>
<thead>
<tr>
<th></th>
<th>DR K</th>
<th>CR K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>30 796</td>
<td></td>
</tr>
<tr>
<td>Furniture and equipment at cost</td>
<td>8 400</td>
<td>1 840</td>
</tr>
<tr>
<td>Allowance for depreciation on furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicles at cost</td>
<td>32 000</td>
<td></td>
</tr>
<tr>
<td>Allowance for depreciation on motor vehicle</td>
<td>9 600</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>145 164</td>
<td></td>
</tr>
<tr>
<td>Rent and rates</td>
<td>11 200</td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>55 876</td>
<td></td>
</tr>
<tr>
<td>Irrecoverable receivables</td>
<td>1 124</td>
<td></td>
</tr>
<tr>
<td>General expenses</td>
<td>8 248</td>
<td></td>
</tr>
<tr>
<td>Bank balance</td>
<td>17 232</td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td>302 488</td>
</tr>
<tr>
<td>Allowance for irrecoverable receivables</td>
<td></td>
<td>1 076</td>
</tr>
<tr>
<td>Inventory at 1st January 2017</td>
<td>34 904</td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>17 156</td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td></td>
<td>12 656</td>
</tr>
<tr>
<td>Drawings</td>
<td>27 152</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>358 456</strong></td>
<td><strong>358 456</strong></td>
</tr>
</tbody>
</table>
You are given the following additional information:

1. Inventory in trade on 31 December 2017 is K37 712.

2. Rates paid in advance at 31 December 2017 is K240.

3. General expenses unpaid at 31 December 2017 is K1 864.

4. Allowance for irrecoverable receivables is to be adjusted to K1 720.

5. A new vehicle was purchased at a cost of K16 000 on 31 December 2017 on credit. The amount due on the new vehicle was payable within one month. No entries had been made in the books in respect of this transaction when the trial balance at 31 December 2017 was extracted.

6. Depreciation is to be charged on furniture and equipment at the rate of 5% percent per annum on cost and on the vehicles at the rate of 25% per annum on cost.

Required:

(i) Prepare V. Sampa’s statement of profit or loss for the year ended 31 December 2017. (7 marks)

(ii) Prepare V. Sampa’s statement of financial position as at 31 December 2017. (7 marks)

(b) BJ limited started in business on January 2014, with a financial year ending 31 December each year. The equipment bought in the first 3 years was:

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1 January</td>
<td>1 machine</td>
<td>K8 000</td>
</tr>
<tr>
<td>2015</td>
<td>1 July</td>
<td>2 machines</td>
<td>K12 000 each</td>
</tr>
<tr>
<td></td>
<td>1 October</td>
<td>1 machine</td>
<td>K6 000</td>
</tr>
<tr>
<td>2016</td>
<td>1 April</td>
<td>1 machine</td>
<td>K14 000</td>
</tr>
</tbody>
</table>

Depreciation is over 10 years, using the straight line method, machines being depreciated for the proportion of the year that they are owned.

Required to show:

(i) The equipment account for the three years each. (2 marks)

(ii) The allowance for depreciation on equipment for each of the three years. (4 marks)

[Total: 20 Marks]
QUESTION SIX

Although Jojo Lamba has run a small business for many years, he has never kept adequate accounting records. However, a need to obtain a bank loan for the expansion of the business has necessitated the preparation of “final” accounts for the year ended 31 December 2017. As a result, the following information has been obtained after much careful research:

1. Jojo Lamba’s business assets and liabilities are as follows:

<table>
<thead>
<tr>
<th></th>
<th>1 Jan 2017</th>
<th>31 Dec 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>17 200</td>
<td>33 600</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>7 800</td>
<td>8 600</td>
</tr>
<tr>
<td>Trade payables</td>
<td>14 800</td>
<td>17 800</td>
</tr>
<tr>
<td>Rent prepaid</td>
<td>600</td>
<td>840</td>
</tr>
<tr>
<td>Electricity accrued due</td>
<td>420</td>
<td>320</td>
</tr>
<tr>
<td>Balance at bank</td>
<td>4 600</td>
<td>3 300</td>
</tr>
<tr>
<td>Cash-In-hand</td>
<td>720</td>
<td>660</td>
</tr>
</tbody>
</table>

2. All takings have been banked after deducting the following payments:

- Cash drawings – Jojo Lamba has kept a record of cash drawings, but suggests these will be in the region of K16 000.
- Casual labour K2 400.
- Purchase of goods for resale K3 600

Note: Takings have been the source of all amounts banked.

3. Bank payments during the year ended 31 December 2017 have been summarized as follows:

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>203 000</td>
</tr>
<tr>
<td>Rent</td>
<td>10 080</td>
</tr>
<tr>
<td>Electricity</td>
<td>2 780</td>
</tr>
<tr>
<td>Delivery costs (to customers)</td>
<td>6 000</td>
</tr>
<tr>
<td>Casual labour</td>
<td>13 240</td>
</tr>
</tbody>
</table>

4. It has been established that a gross profit of 33\(\frac{1}{3}\)% on cost has been obtained on all goods sold.

5. Despite her apparent lack of precise accounting records, Jojo Lamba is able to confirm that he has taken out of the business during the year under review goods for his own use costing K1 200.
Required:

(a) Prepare a computation of total purchases for the year ending 31 December 2017. (2 marks)

(b) (i) Prepare Jojo Lamba’s statement of profit or loss for the year ending 31 December 2017. (7 marks)

(ii) Prepare a computation of opening capital amount. (3½ marks)

(iii) Prepare Jojo Lamba’s statement of financial position as 31 December 2017. (7½ marks)

[Total: 20 Marks]
SECTION A

SOLUTION ONE

1.1  A
1.2  B
1.3  C
1.4  D
1.5  C
1.6  B
1.7  A
1.8  D
1.9  B
1.10 C
### SOLUTION TWO

(a) **Statement of Profit and Loss for the year ended 30 June 2017**

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1 016 000</td>
<td></td>
</tr>
<tr>
<td>Less sales returns</td>
<td>(12 000)</td>
<td>1 004 000</td>
</tr>
<tr>
<td>Opening Inventory</td>
<td>150 000</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>760 000 – 2 260</td>
<td>757 740</td>
</tr>
<tr>
<td>Add:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error of invoice omission</td>
<td>6 000</td>
<td></td>
</tr>
<tr>
<td>Carriage inwards</td>
<td>43 000</td>
<td></td>
</tr>
<tr>
<td>Less purchases returns</td>
<td>(24 000)</td>
<td>782 740</td>
</tr>
<tr>
<td>Less closing inventory</td>
<td>(136 000)</td>
<td>796 740</td>
</tr>
<tr>
<td>Add other income – discount received</td>
<td></td>
<td>2 000</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
<td>209 260</td>
</tr>
<tr>
<td>Carriage outwards</td>
<td>6 000</td>
<td></td>
</tr>
<tr>
<td>Staff salaries (84 000 + 1 800)</td>
<td>85 800</td>
<td></td>
</tr>
<tr>
<td>Office expenses</td>
<td>15 000</td>
<td></td>
</tr>
<tr>
<td>Increase in allowance on irrecoverable</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>10 000</td>
<td></td>
</tr>
<tr>
<td>Irrecoverable receivables</td>
<td>2 800</td>
<td></td>
</tr>
<tr>
<td>Discount allowed</td>
<td>2 400</td>
<td></td>
</tr>
<tr>
<td>Rent and business rates (5 600 – 400)</td>
<td>5 200</td>
<td></td>
</tr>
<tr>
<td>Allowance for depreciation on F&amp;F</td>
<td>3 000</td>
<td>131 000</td>
</tr>
<tr>
<td>Net profit</td>
<td>78 260</td>
<td></td>
</tr>
</tbody>
</table>

(b) ** Appropriation Account section**

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net trading profit</td>
<td>78 260</td>
<td></td>
</tr>
<tr>
<td>Add:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest on drawings - Sakala</td>
<td>720</td>
<td></td>
</tr>
<tr>
<td>- Moono</td>
<td>560</td>
<td></td>
</tr>
<tr>
<td>Interest on Current Account – Moono</td>
<td>60</td>
<td>1 340</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership salaries - Sakala</td>
<td>24 000</td>
<td></td>
</tr>
<tr>
<td>- Moono</td>
<td>16 000</td>
<td></td>
</tr>
<tr>
<td>Interest on current account - Sakala</td>
<td>200</td>
<td>40 200</td>
</tr>
<tr>
<td>- Moono</td>
<td>39 400</td>
<td></td>
</tr>
<tr>
<td>Interests on capitals – Sakala</td>
<td>10 000</td>
<td></td>
</tr>
<tr>
<td>- Moono</td>
<td>5 000</td>
<td>(15 000)</td>
</tr>
<tr>
<td>Share of residual profit – Sakala</td>
<td>½ x 24 200</td>
<td>12 200</td>
</tr>
<tr>
<td>- Moono</td>
<td>½ x 24 200</td>
<td>(24 400)</td>
</tr>
</tbody>
</table>
(c) **Current Accounts**

<table>
<thead>
<tr>
<th></th>
<th><strong>Sakala</strong></th>
<th><strong>Moono</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K</strong></td>
<td><strong>K</strong></td>
<td><strong>K</strong></td>
</tr>
<tr>
<td>Balance b/f</td>
<td>1 200</td>
<td>4 000</td>
</tr>
<tr>
<td>Interest on Current A/c</td>
<td>60</td>
<td>200</td>
</tr>
<tr>
<td>Interest on drawings</td>
<td>720</td>
<td>560</td>
</tr>
<tr>
<td>Drawings in cash</td>
<td>30 000</td>
<td>20 000</td>
</tr>
<tr>
<td>Drawing in Kind</td>
<td>1 000</td>
<td>1 260</td>
</tr>
<tr>
<td>Balances c/d</td>
<td>18 580</td>
<td>10 020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Sakala</strong></th>
<th><strong>Moono</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K</strong></td>
<td><strong>K</strong></td>
<td><strong>K</strong></td>
</tr>
<tr>
<td>Interest on Current A/c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>24 000</td>
<td>16 000</td>
</tr>
<tr>
<td>Interest on capitals</td>
<td>10 000</td>
<td>5 000</td>
</tr>
<tr>
<td>Share of profit</td>
<td>12 200</td>
<td>12 200</td>
</tr>
<tr>
<td>Balances</td>
<td>50 100</td>
<td>33 100</td>
</tr>
</tbody>
</table>

**SOLUTION THREE**

a) Listing and explanation of uses of four main books of prime entry

1. **Sales Day Book**
   This is a book of prime entry in which we record credit sales.

2. **Purchases Day Book**
   This is a book of prime entry in which we record items bought for resale on credit.

3. **Cash Book**
   This is a book of prime entry in which we record cash transactions.

4. **Purchases Returns Day Book**
   This is a book of prime entry in which we record goods returned back to our suppliers.

5. **Sales Returns Day Book**
   This is a book of prime entry in which we record goods returned to us by our credit customers.

6. **Journal Proper**
   This is a book of prime entry which is used for correction of errors, writing off bad debts, purchase and sale of non-current assets on credit and opening entries.

7. **Petty Cash Book**
   This is a book of prime entry which is used for recording cash transactions for small receipts and payments.
b) Haven’s Ltd Company
Revised Cash Book

<table>
<thead>
<tr>
<th>Dr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>K’000</td>
<td>K’000</td>
</tr>
<tr>
<td>Balance b/d</td>
<td>Bank charges</td>
</tr>
<tr>
<td>500</td>
<td>5</td>
</tr>
<tr>
<td>Dividend received</td>
<td>Rent</td>
</tr>
<tr>
<td>80</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Standing order</td>
</tr>
<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Cheque error</td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Balance c/d</td>
<td>Balance c/d</td>
</tr>
<tr>
<td>580</td>
<td>517</td>
</tr>
</tbody>
</table>

c) Haven’s Ltd Company’s
Bank Reconciliation Statement as at 31st March 2017

<table>
<thead>
<tr>
<th></th>
<th>K’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance as per revised cash book</td>
<td>517</td>
</tr>
<tr>
<td>Add: Unpresented Cheque</td>
<td>10</td>
</tr>
<tr>
<td>Less: Unaccredited Cheque</td>
<td>(127)</td>
</tr>
<tr>
<td>Balance as per bank statement</td>
<td>400</td>
</tr>
</tbody>
</table>

SOLUTION FOUR

a) Five (5) advantages of converting a business from a sole trader to a private limited company

1. More funds can easily be raised compared to a sole trader and therefore easy to expand the business
2. Private limited company has a separate legal entity. Therefore a company is taxed differently from a sole trader who is taxed as an individual.
3. Private limited company has limited liability unlike a sole trader who has unlimited liability. This implies that if the business becomes bankrupt, the owner losses only the amount invested in a company and their private possessions will not be tempered with.
4. Since a private limited company has a separate legal identity from its shareholders, the business will continue to exit even if one shareholder dies.
5. There is consultancy in decision making
b) **Five (5) advantages of computerized accounting packages**

1. Large volumes of data can be processed.
2. Computerized systems provide more accurate data than manual systems.
3. Non-specialists find the packages user friendly
4. Quicker to process large volumes of data using a computerized system
5. Input data can easily be analyzed.

c) **Disadvantages of computerized accounting packages**

1. Installation costs are high, more time is required to train personnel's
2. Security checks are required to ensure no one has unauthorized access to information.
3. System of coding must be developed.
4. Lack of audit trail
5. Sometimes there may be resistance from staff in adopting the new system.

**SOLUTION FIVE**

**Workings:**

(i) Depreciation on motor vehicles 25% x 32 000 = 8 000.

(ii) Allowance for depreciation on furniture and equipment

   5% x 8 400 = K420

(iii) Rent and rate expenses 11 200 – 240 = 10 964

(iv) General expenses 8 248 + 1 864 = 10 112

(v) Increase in allowance irrecoverable receivables = 1 720 – 1 076 = K644
(a) (i) V. Sampa’s

Statement of Profit and Loss for the year ended 31 December 2017

<table>
<thead>
<tr>
<th>Description</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>302 488</td>
</tr>
<tr>
<td>Opening inventory</td>
<td>34 904</td>
</tr>
<tr>
<td>Purchases</td>
<td>145 164</td>
</tr>
<tr>
<td></td>
<td>180 068</td>
</tr>
<tr>
<td>Less closing inventory</td>
<td>(37 712)</td>
</tr>
<tr>
<td>Gross profit</td>
<td>(142 256)</td>
</tr>
<tr>
<td>Less: increase in allowance on irrecoverable</td>
<td>644</td>
</tr>
<tr>
<td>Deprecation allowance on motor vehicles</td>
<td>8 000</td>
</tr>
<tr>
<td>Depreciation allowance on furniture and equipment</td>
<td>420</td>
</tr>
<tr>
<td>Rent and rates (11 200 – 240)</td>
<td>10 960</td>
</tr>
<tr>
<td>Salaries</td>
<td>55 876</td>
</tr>
<tr>
<td>Irrecoverable receivables</td>
<td>1 124</td>
</tr>
<tr>
<td>General expenses</td>
<td>10 112</td>
</tr>
<tr>
<td>Net profit</td>
<td>(87 136)</td>
</tr>
</tbody>
</table>

(ii) V. Sampa’s

Statement of financial position as at 31 December 2017

<table>
<thead>
<tr>
<th>Non-Current assets</th>
<th>Cost</th>
<th>Accum’d Depn’</th>
<th>NBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicles (32 000 + 16 000) (9 600+8 000)</td>
<td>48 000</td>
<td>17 600</td>
<td>30 400</td>
</tr>
<tr>
<td>Furniture and equipment (1 840 + 420)</td>
<td>8 400</td>
<td>2 260</td>
<td>6 140</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current assets</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>37 712</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade receivables (17 156 – 1 720)</td>
<td>15 436</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td>17 232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepaid rates</td>
<td>240</td>
<td>70 620</td>
<td>107 160</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital and liabilities</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital at start</td>
<td>30 796</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net profit</td>
<td>72 996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less drawings</td>
<td>(27 152)</td>
<td></td>
<td>45 844</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current liabilities</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>12 656</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other payables-cost of new vehicle</td>
<td>16 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accrued General expenses</td>
<td>1 864</td>
<td>30 520</td>
<td>107 160</td>
</tr>
</tbody>
</table>
(b) (i) Equipment Account

<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
<th>K</th>
<th>Date</th>
<th>Details</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Jan 1</td>
<td>Bank</td>
<td>8 000</td>
<td>2014 Dec 31</td>
<td>Balance</td>
<td>c/d 8 000</td>
</tr>
<tr>
<td>2015 Jan 1</td>
<td>Balance</td>
<td>b/f 8 000</td>
<td>2015 Dec 31</td>
<td>Balance</td>
<td>c/d 38 000</td>
</tr>
<tr>
<td>July 1</td>
<td>Bank</td>
<td>24 000</td>
<td>2016 Dec 31</td>
<td>Balance</td>
<td>c/d 52 000</td>
</tr>
<tr>
<td>Oct 1</td>
<td>Bank</td>
<td>6 000</td>
<td>2016 Jan 1</td>
<td>Balance</td>
<td>b/f 38 000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016 Dec 31</td>
<td>Profit or loss</td>
<td>2 150</td>
</tr>
<tr>
<td>2016 Jan 1</td>
<td>Balance</td>
<td>b/f 38 000</td>
<td>2016 Dec 31</td>
<td>Balance</td>
<td>c/d 52 000</td>
</tr>
<tr>
<td>April 1</td>
<td>Bank</td>
<td>14 000</td>
<td>2016 Jan 1</td>
<td>Balance</td>
<td>b/f 52 000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dec 31</td>
<td>Profit or loss</td>
<td>2 150</td>
</tr>
<tr>
<td>2017 Jan 1</td>
<td>Balance</td>
<td>b/f 52 000</td>
<td>2017 Jan 1</td>
<td>Balance</td>
<td>b/f 7 800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Profit or loss</td>
<td>7 800</td>
</tr>
</tbody>
</table>

(ii) Allowance for Deprecation on Equipment

<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
<th>K</th>
<th>Date</th>
<th>Details</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Dec 31</td>
<td>Balance</td>
<td>c/d 800</td>
<td>2014 Dec 31</td>
<td>Profit or loss</td>
<td>800</td>
</tr>
<tr>
<td>2015 Dec 31</td>
<td>Balance</td>
<td>c/d 2 950</td>
<td>2015 Jan 1</td>
<td>Balance</td>
<td>b/f 800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dec 31</td>
<td>Profit or loss</td>
<td>2 150</td>
</tr>
<tr>
<td>2016 Dec 31</td>
<td>Balance</td>
<td>c/d 7 800</td>
<td>2016 Jan 1</td>
<td>Balance</td>
<td>b/f 2 950</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dec 31</td>
<td>Profit or loss</td>
<td>4 850</td>
</tr>
<tr>
<td>2017 Jan 1</td>
<td>Balance</td>
<td>b/f 7 800</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Workings:

Year 1 10% x K8 000 = K800

Year 2 (10% x 8 000) + (10% x 8 000) + (10% x 24 000 x 6/12) + 10% x 6 000 x 3/12 = K2 150

Year 3 (10% x 38 000) + (10% 14 000 x 9/12) = K4 850
SOLUTION SIX

(a) Trade Payables Control Account

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>203 000</td>
<td>Balance b/f</td>
<td>14 800</td>
</tr>
<tr>
<td>Cash</td>
<td>3 600</td>
<td>Drawings in kind</td>
<td>1 200</td>
</tr>
<tr>
<td>Balance c/d</td>
<td>17 800</td>
<td>Purchases (balancing fig.)</td>
<td>208 400</td>
</tr>
<tr>
<td>c/d</td>
<td></td>
<td></td>
<td>224 400</td>
</tr>
</tbody>
</table>

(b)  

(i) Jojo’s Lamba’ Statement of Profit or loss for the year ended 31 December 2017

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (deducted – as margin is 25% = 4 x Gross profit)</td>
<td>256 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening inventory</td>
<td>17 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>208 400</td>
<td>225 600</td>
<td></td>
</tr>
<tr>
<td>Less closing inventory</td>
<td>33 600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods sold =</td>
<td>192 000</td>
<td>Gross profit (33 1/3 of cost of goods sold)</td>
<td>64 000</td>
</tr>
<tr>
<td>Less casual labour (2 400 + 13 240)</td>
<td>15 640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent (10 080 + 600 – 840)</td>
<td>9 840</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery costs</td>
<td>6 000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity (2 780 + 320 – 420)</td>
<td>2 680</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net profit</td>
<td>34 160</td>
<td>29 840</td>
<td></td>
</tr>
</tbody>
</table>

(ii) Opening Journal Entry

<table>
<thead>
<tr>
<th></th>
<th>K</th>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td>17 200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>7 800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent prepaid</td>
<td>600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td>4 600</td>
<td>Cash</td>
<td>720</td>
</tr>
<tr>
<td>Trade payables</td>
<td>14 800</td>
<td>Electricity accrued</td>
<td>420</td>
</tr>
<tr>
<td>Electricity accrued</td>
<td>15 700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>.: Capital</td>
<td>30 920</td>
<td>30 920</td>
<td></td>
</tr>
</tbody>
</table>
(iii) Jojo Lamba’s Statement of financial position as at 31 December 2011

>K

Current assets:
- Inventory: 33,600
- Trade receivables: 8,600
- Bank: 3,300
- Cash: 660
- Prepaid rent: 840
Total current assets: 47,000

Capital and liabilities:
- Capital: 15,700
- Net profit: 29,840
- Drawings: (15,460 + 1,200) = 16,660
Total drawings: 13,180

Current liabilities:
- Trade payables: 17,800
- Accrued electricity: 320
Total current liabilities: 18,120

Workings for drawings:

**Cash drawings**

**Step 1** Find cash received from sales:
- Opening trade receivables: 7,800
- Sales: 256,000
- Less closing trade receivables: 8,600
- Equals cash received: 255,200

**Step 2** Find cash banked =
- Opening balance: (4,600)
- Payments (bank payments): 235,100
- Closing balance: 3,300
- Cash banked: 233,800

**Step 3** Find cash drawings using a cash account.

<table>
<thead>
<tr>
<th>Cash Account</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance b/f</td>
<td>720</td>
</tr>
<tr>
<td>Sales receipts</td>
<td>255,200</td>
</tr>
<tr>
<td>Casual labour</td>
<td>2,400</td>
</tr>
<tr>
<td>Purchases</td>
<td>3,600</td>
</tr>
<tr>
<td>Bank</td>
<td>233,800</td>
</tr>
<tr>
<td>Cash drawings</td>
<td>15,460</td>
</tr>
<tr>
<td>Balance c/d</td>
<td>660</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>255,920</strong></td>
</tr>
</tbody>
</table>

:. Total drawings 15,460 + 1,200 drawings in kind.

END OF SOLUTIONS
DIPLOMA IN ACCOUNTANCY PROGRAMME EXAMINATIONS

LEVEL ONE

DA 2: QUANTITATIVE ANALYSIS

WEDNESDAY 13 JUNE 2018

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   Section A: One (1) Compulsory question.
   Section B: Five (5) Optional Questions. Attempt any Four (4) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. Cell Phones are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – (COMPULSORY)
Attempt all ten (10) multiple choice questions

QUESTION ONE
Each of the following questions has only one correct answer. Write the letter of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 Maximax is a criterion used when making decisions under conditions of

A. Uncertainty
B. Certainty
C. Risk
D. Alternatives  (2 marks)

1.2 The collection of one or more outcomes from a sample space is called

A. Random experiment
B. Probability
C. Event
D. Random variable  (2 marks)

1.3 Mr. Musonda invested an amount of K8,000 in a fixed deposit account for 2 years at compound interest rate of 5% per annum. How much will he get on the maturity of the fixed deposit?

A. K8,500
B. K8,620
C. K8,730
D. K8,820  (2 marks)

1.4 In linear programming, constraints can be represented by

A. Equalities
B. Inequalities
C. Ratios
D. Both A and B  (2 marks)

1.5 The arithmetic mean of a certain set of observations is 12 and the number of observations are 30, then the sum of all values is

A. 18
B. 42
C. 360
D. 2.5  (2 marks)
1.6  Due annuity is deposited at:
   A.  the beginning of each interval
   B.  the end of each interval.
   C.  the middle of each interval.
   D.  the quarter of each interval.

(2 marks)

1.7  The average price of a blanket in a shop is K 100 and standard deviation is K15. The prices of the blankets are normally distributed.
    The probability value of a blanket with the price not more than K 122 is:
   A.  0.4292
   B.  0.0698
   C.  0.9292
   D.  0.5698

(2 marks)

1.8  Kwanu company packs its products using varying contents in weight (g)
    The distribution of weight of tins of a particular hour is 15g, 10g, 18g, 16g,
    17g and 14g.
    The median weight of the tins is:
   A.  17g.
   B.  15.5g
   C.  15g.
   D.  16.5g

(2 marks)

1.9  The probability distribution of test marks is given in the table below:

<table>
<thead>
<tr>
<th>MARK</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBABILITY</td>
<td>0.1</td>
<td>0.4</td>
<td>0.05</td>
<td>0.3</td>
<td>0.15</td>
</tr>
</tbody>
</table>

The expected mark of the test is:
   A.  60.
   B.  60.5
   C.  70
   D.  55

(2 marks)
1.10. The test results of Maths and Physics of four candidates are given in the table below:

<table>
<thead>
<tr>
<th>MATHS (x)</th>
<th>60</th>
<th>70</th>
<th>50</th>
<th>65</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICS (y)</td>
<td>60</td>
<td>60</td>
<td>80</td>
<td>50</td>
</tr>
</tbody>
</table>

The Rank correlation coefficient of the test is:

A. 0.55  
B. −0.4  
C. 0.4  
D. −0.55 

(2 marks)  
[Total: 20 Marks]
SECTION B

There are FIVE (5) questions in this section. Attempt any FOUR (4) questions.

QUESTION TWO

(a) Mr. Mambala obtained a sum of K10,400 at 10% simple interest after three years. How much did he deposit? (3 marks)

(b) Find the value today of K12,000 at 9% interest compounded monthly in the account after six years. (4 marks)

(c) The probability distribution for the number of television sets per household in Lusaka is as shown below.

<table>
<thead>
<tr>
<th>Number of Televisions</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>0.01</td>
<td>0.23</td>
<td>0.41</td>
<td>0.20</td>
<td>0.10</td>
<td>0.05</td>
</tr>
</tbody>
</table>

(i) Compute the expected value of the number of television sets per household (2 marks)

(ii) What is the standard deviation of the number of television sets per household? (3 marks)

(d) A university found that 20% of its students withdraw without completing the introductory statistics course. Assume that 20 students have registered for the course this year, find the probability that:

(i) Two or fewer will withdraw (2 marks)

(ii) Exactly four will withdraw (2 marks)

(iii) More than three will withdraw (2 marks)

(iv) Find the expected number of withdrawals (2 marks)

[Total: 20 Marks]
**QUESTION THREE**

(a) Automobile travelling on the Kafue roundabout are checked for speed by the Road Transport and Safety Agency (RTSA) radar system. The following is a frequency distribution of speeds.

<table>
<thead>
<tr>
<th>Speed (kilometers per hour)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 =&lt; 49</td>
<td>10</td>
</tr>
<tr>
<td>49 =&lt; 53</td>
<td>40</td>
</tr>
<tr>
<td>53 =&lt; 57</td>
<td>150</td>
</tr>
<tr>
<td>57 =&lt; 61</td>
<td>175</td>
</tr>
<tr>
<td>61 =&lt; 65</td>
<td>75</td>
</tr>
<tr>
<td>65 =&lt; 69</td>
<td>15</td>
</tr>
<tr>
<td>69 =&lt; 73</td>
<td>10</td>
</tr>
</tbody>
</table>

(i) Find the mean speed of the automobile travelling on the Kafue roundabout, giving your answer to 2 significant figures. (4 marks)

(ii) Compute the median. (4 marks)

(iii) Compute the variance. (3 marks)

(b) A machine costs K9,000. Annual operating costs are K200 for the first year, and then increased by K2,000 every year.

Assume that the machine has no resale value when replaced and that future costs are not discounted.

(i) Determine the best age at which to replace the machine. (9 marks)

(ii) If the optimum replacement policy is followed, find the yearly cost of owning and operating the machine. (9 marks)

[Total: 20 Marks]
QUESTION FOUR

(a) Pinto center researches in seedling height (cm) growth. In order to find out the number of seedlings in each height range the following distribution was obtained:

<table>
<thead>
<tr>
<th>HEIGHT RANGE (CM)</th>
<th>NUMBER OF SEEDLINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 – 28</td>
<td>2</td>
</tr>
<tr>
<td>29 – 32</td>
<td>3</td>
</tr>
<tr>
<td>33 – 36</td>
<td>8</td>
</tr>
<tr>
<td>37 – 40</td>
<td>10</td>
</tr>
<tr>
<td>41 – 44</td>
<td>7</td>
</tr>
<tr>
<td>45 – 48</td>
<td>4</td>
</tr>
<tr>
<td>49 – 52</td>
<td>2</td>
</tr>
</tbody>
</table>

Required:
Calculate:

(i) Mean height
(ii) Standard deviation of the height
(iii) Median of the height

(b) Mr Zimba deposited K 40 at the end of each quarter in an account offering 4% interest compounded quarterly for 4 years.

Required:
Calculate the expected sum.

[Total: 20 Marks]
QUESTION FIVE

(a) Jose investor intends to select one of the projects between Banana project and Orange project. The expected cash flows of the projects in four years are given in the table below:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>BANANA PROJECT</th>
<th>ORANGE PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500</td>
<td>700</td>
</tr>
<tr>
<td>2</td>
<td>900</td>
<td>800</td>
</tr>
<tr>
<td>3</td>
<td>400</td>
<td>600</td>
</tr>
<tr>
<td>4</td>
<td>600</td>
<td>900</td>
</tr>
</tbody>
</table>

The cost of the capital is 17%. The initial investment cost of each project is K 1,400.

Required:
Determine the project which must be selected. (12 marks)

(b) The research organization studies that depreciation value(Y) of a Machine depends on the useful life of the machine(X). The results are summarized in the table below:

<table>
<thead>
<tr>
<th>USEFUL LIFE IN YEARS (X)</th>
<th>10</th>
<th>13</th>
<th>14</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPRECIATION VALUE (K 000)</td>
<td>50</td>
<td>70</td>
<td>82</td>
<td>75</td>
<td>65</td>
<td>40</td>
<td>78</td>
<td>67</td>
<td>87</td>
<td>90</td>
</tr>
</tbody>
</table>

Required:
Calculate the Coefficient of Correlation by Product Moment method. (8 marks)

[Total: 20 Marks]
QUESTION SIX

(a) The probability that the following four centers Kena, Dono, Cuna and Biva students will sit for Quantitative Analysis examination is the same. The probability that a student from K center fails the examination is 60%, D center is 56 %, C center is 75 % and B center is 70%.

Required:

A student who failed the exam is selected find the probability that the student was from C center. (8 marks)

(b) The probability distribution of product sale values (K000) is given below:

<table>
<thead>
<tr>
<th>SALE VALUE(000)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBABILITY</td>
<td>0.40</td>
<td>0.30</td>
<td>0.10</td>
<td>0.20</td>
</tr>
</tbody>
</table>

The given random numbers are 40, 25, 76, 80, 55, 64 and 38.

Required:

Simulate the sale values of seven days using the above random numbers. (12 marks)

[Total: 20 Marks]
1.1 The correct answer is A

Under conditions of uncertainty, the decision-maker has a knowledge about the states of nature that happen but lacks the knowledge about the probabilities of their occurrence. Under conditions of uncertainty, a few decision criteria are available which could be of help to the decision-maker and a choice among them is determined by the company’s policy and attitude of the decision maker. These are maximax, maximin, minimax regret, Hurwicz and Laplace Criteria.

1.2 The correct answer is C

An event is a collection of one or more outcomes from an experiment. In other words, it is a subset of a sample space.

1.3 The correct answer is D

We are given $P = K8,000, r = 0.05$ and $t = 2$. We need to find $A$.

$$A(t) = P \left(1 + \frac{r}{n}\right)^n$$

$$A(5) = 8000 \left(1 + \frac{0.05}{1}\right)^{(2)}$$

$$= 8000 \left(1.05\right)^{2} = K8,820$$

1.4 The correct answer is B

Linear programming deals with the optimization (maximization or minimization) of a function of variables known as objective function, subject to a set of linear equations and/or inequalities known as constraints.

Correct answer is D. Linear programming deals with both equalities (A) and inequalities (B) as per statement above.

1.5 The correct answer is C

$$\bar{x} = \frac{\sum x}{n}$$

$$12 = \frac{\sum x}{30}$$

$$\therefore \sum x = 12 \times 30 = 360$$

1.6 A
1.7  
C          
P( X≤122)= 0.5 + P(100<X<122) = 0.5 + \frac{122-100}{15} = 0.5 + \frac{22}{15} = 0.5 + (1.47) 
= 0.5 + 0.4292 = 0.9292

1.8  B  
10,14(15,16),17,18  
Median = \frac{15+16}{2} = \frac{31}{2} = 15.5.

1.9  A
E(M) = 40\times0.1 + 50 \times0.40 + 60 \times 0.05 + 70\times0.30 + 80\times0.15 
= 4 + 20 + 3 + 21 + 12 = 60

1.10  D. 
M | RM | P | RP | RM - RP = d | d^2 
---|----|---|----|-------------|-----
60 | 3  | 60 | 3(2.5) | 3 - 2.5 = 0.5 | 0.25 
70 | 1  | 60 | 2(2.5) | 1 - 2.5 = -1.5 | 2.25 
50 | 4  | 80 | 1    | 4 - 1 = 3        | 9   
65 | 2  | 50 | 4    | 2 - 4 = -2        | 4   

\sum d^2 = 15.5

R = 1 - \frac{6\sum d^2}{n(4^2-1)} = 1 - \frac{6 \times 15.5}{4 \times (4^2-1)} = 1 - \frac{93}{60} = 1 - 1.55 = -0.55

SOLUTION TWO

(a) We are given  r = 10\%, t = 3 \text{ years}  and  A = K10,400. We need to find  P, from the formula,

\[ A = P + I \]
\[ A = P + Prt \]
\[ A = P(1+rt) \]
\[ P = \frac{A}{1+rt} = \frac{10,400}{1+0.1(3)} = \frac{10,400}{1.3} = K8,000 \]

(b) We are given  FV = 12,000, r = 0.09, t = 6 \text{ years}. We need to find  P.

\[ FV = P \left(1 + \frac{r}{n}\right)^{nt} \]
\[ 12,000 = P \left(1 + \frac{0.09}{12}\right)^{12(6)} \]
\[ 12000 = P(1.0075)^{72} \]
\[ P = K7007.08 \]
(c)

i. \[ E(X) = \sum_{x=0}^{5} xP(X = x) \]
\[ = 0(0.01) + 1(0.23) + 2(0.41) + 3(0.20) + 4(0.10) + 5(0.05) \]
\[ = 0 + 0.23 + 0.82 + 0.60 + 0.40 + 0.25 \]
\[ = 2.3 \]

ii. \[ Var(X) = E(X^2) - (E(X))^2 \]
\[ E(X^2) = \sum_{x=0}^{5} x^2P(X = x) \]
\[ = 0^2(0.01) + 1^2(0.23) + 2^2(0.41) + 3^2(0.20) + 4^2(0.10) + 5^2(0.05) \]
\[ = 0 + 0.23 + 1.64 + 1.8 + 1.6 + 1.25 \]
\[ = 6.52 \]
\[ \therefore Var(X) = 6.52 - 2.3^2 = 1.23 \]
\[ \text{Standard deviation} = \sqrt{VarX} = \sqrt{1.23} = 1.12 \]

(d) \( n = 20, p = 0.2, q = 0.8 \)

i. \[ P(X = x) = \binom{n}{x} p^x (1-p)^{n-x} \]
\[ P(X \leq 2) = P(X = 0) + P(X = 1) + P(X = 2) \]
\[ = \binom{20}{0}(0.2)^0(0.8)^{20} + \binom{20}{1}(0.2)^1(0.8)^{19} + \binom{20}{2}(0.2)^2(0.8)^{18} \]
\[ = 0.0115 + 0.0576 + 0.1369 \]
\[ = 0.2060 \]

ii. \[ P(X = x) = \binom{n}{x} p^x (1-p)^{n-x} \]
\[ P(X = 4) = \binom{20}{4}(0.2)^4(0.8)^{16} \]
\[ = 0.2182 \]

iii. \[ P(X > 3) = 1 - P(X \leq 3) \]
\[ = 1 - \left[ P(X = 0) + P(X = 1) + P(X = 2) + P(X = 3) \right] \]
\[ = 1 - \left[ 0.2060 + \binom{20}{3}(0.2)^3(0.8)^{17} \right] \]
\[ = 1 - \left[ 0.2060 + 0.2054 \right] \]
\[ = 1 - 0.4114 \]
\[ = 0.5886 \]
iv. \( E(X) = np = 20 \times 0.2 = 4 \)

**SOLUTION THREE**

(a)

<table>
<thead>
<tr>
<th>Speed</th>
<th>Mid-point ( x )</th>
<th>( f )</th>
<th>( fx )</th>
<th>( cf )</th>
<th>((x - \bar{x}))</th>
<th>((x - \bar{x})^2)</th>
<th>( f(x - \bar{x})^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 – 49</td>
<td>47</td>
<td>10</td>
<td>470</td>
<td>10</td>
<td>-11</td>
<td>121</td>
<td>1210</td>
</tr>
<tr>
<td>49 – 53</td>
<td>51</td>
<td>40</td>
<td>2040</td>
<td>50</td>
<td>-7</td>
<td>49</td>
<td>1960</td>
</tr>
<tr>
<td>53 – 57</td>
<td>55</td>
<td>150</td>
<td>8250</td>
<td>200</td>
<td>-3</td>
<td>9</td>
<td>1350</td>
</tr>
<tr>
<td>57 – 61</td>
<td>59</td>
<td>175</td>
<td>10325</td>
<td>375</td>
<td>1</td>
<td>1</td>
<td>175</td>
</tr>
<tr>
<td>61 – 65</td>
<td>63</td>
<td>75</td>
<td>4725</td>
<td>450</td>
<td>5</td>
<td>25</td>
<td>1875</td>
</tr>
<tr>
<td>65 – 69</td>
<td>67</td>
<td>15</td>
<td>1005</td>
<td>465</td>
<td>9</td>
<td>81</td>
<td>1215</td>
</tr>
<tr>
<td>69 – 73</td>
<td>71</td>
<td>10</td>
<td>710</td>
<td>475</td>
<td>13</td>
<td>169</td>
<td>1690</td>
</tr>
</tbody>
</table>

\[
\sum f = 475 \quad \sum fx = 27525 \quad \sum f(x - \bar{x})^2 = 9,475
\]

i. \( \bar{x} = \frac{\sum fx}{\sum f} = \frac{27525}{475} = 58 \)

ii. \[
\text{Median} = \ell + \left( \frac{n - cf}{f} \right) \times h
\]

Here \( \frac{n}{2} = \frac{475}{2} = 237.5 \)

So, 57 – 61 is the median class

Now, \( \ell = 57 \quad f = 175 \quad cf = 200 \quad h = 4 \)

\[
\text{Median} = 57 + \frac{237.5 - 200}{175} \times 4
\]

\[
= 57 + \frac{37.5}{175} \times 4
\]

\[
= 57 + 0.8571
\]

\[
= 57.8571
\]

iii. \[
S^2 = \frac{\sum f(x - \bar{x})^2}{n-1} = \frac{9475}{475-1} = 20
\]
(b) It is given that the machine A has no resale value when replaced. The average annual cost is computed in the following table:

<table>
<thead>
<tr>
<th>Year of service 1</th>
<th>Resale value ((S))</th>
<th>Purchase price – resale value ((C-S))</th>
<th>Annual maintenance cost (f(t))</th>
<th>Summation of maintenance cost (\sum_{t=0}^{n} f(t))</th>
<th>Total cost ((3) + (5))</th>
<th>Average annual cost ((6) / (1))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Zero</td>
<td>9,000</td>
<td>200</td>
<td>200</td>
<td>9,200</td>
<td>9,200</td>
</tr>
<tr>
<td>2</td>
<td>Zero</td>
<td>9,000</td>
<td>2,200</td>
<td>2,400</td>
<td>11,400</td>
<td>5,700</td>
</tr>
<tr>
<td>3</td>
<td>Zero</td>
<td>9,000</td>
<td>4,200</td>
<td>6,600</td>
<td>15,600</td>
<td>5,200</td>
</tr>
<tr>
<td>4</td>
<td>Zero</td>
<td>9,000</td>
<td>6,200</td>
<td>12,800</td>
<td>21,800</td>
<td>5,450</td>
</tr>
<tr>
<td>5</td>
<td>Zero</td>
<td>9,000</td>
<td>8,200</td>
<td>21,000</td>
<td>30,000</td>
<td>6,000</td>
</tr>
</tbody>
</table>

From the table above, we find that machine A should be replaced at the end of 3 years and the average yearly cost of owning and operating the machine at this time of replacement is K5, 200.

**SOLUTION FOUR**

(a) \(\bar{x} = \frac{\Sigma fx}{\Sigma f}\)

<table>
<thead>
<tr>
<th>(x)</th>
<th>(f)</th>
<th>(fx)</th>
<th>(fx^2)</th>
<th>(cf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.5</td>
<td>2</td>
<td>53</td>
<td>1404.5</td>
<td>2</td>
</tr>
<tr>
<td>30.5</td>
<td>3</td>
<td>91.5</td>
<td>2790.75</td>
<td>5</td>
</tr>
<tr>
<td>34.5</td>
<td>8</td>
<td>276</td>
<td>9522</td>
<td>13</td>
</tr>
<tr>
<td>38.5</td>
<td>10</td>
<td>385</td>
<td>14822.5</td>
<td>23</td>
</tr>
<tr>
<td>42.5</td>
<td>7</td>
<td>297.5</td>
<td>12643.75</td>
<td>30</td>
</tr>
<tr>
<td>46.5</td>
<td>4</td>
<td>186</td>
<td>8649</td>
<td>34</td>
</tr>
<tr>
<td>50.5</td>
<td>2</td>
<td>101</td>
<td>5100.5</td>
<td>36</td>
</tr>
<tr>
<td>(\Sigma f = 36)</td>
<td>(\Sigma fx = 1390)</td>
<td>(\Sigma fx^2 = 54933)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) \(\bar{x} = \frac{\Sigma fx}{\Sigma f} = 38.6\)  
(ii) \(\sigma = \sqrt{\frac{\Sigma fx^2}{\Sigma f} - \bar{x}^2}\)  
\(= \sqrt{\frac{54933}{36} - 38.6^2}\)  
\(= \sqrt{1525.92 - 1489.96}\)  
\(= \sqrt{35.96}\)  
\(= 5.99\)
(ii) \[ \text{Median} = \text{LB} + \left( \frac{Li - cf}{\sum f} \right) c \]

\[ = 36.5 + \left( \frac{18-13}{10} \times 4 \right) \]

\[ = 36.5 + \left( \frac{5}{10} \times 4 \right) \]

\[ = 36.5 + 2 = 38.5 \]

(b) \[ P = K40 \quad m = 4 \quad i=0.04 \quad n= 4 \]

\[ A = P \left( \frac{(1+i)^{m} - 1}{i/m} \right) = 40 \left( \frac{(1+0.04)^{4} - 1}{0.04} \right) \]

\[ = 40 \left( \frac{1.1726 - 1}{0.01} \right) \]

\[ = 40 \left( \frac{0.1726}{0.01} \right) \]

\[ = 40 \times 17.26 \]

\[ = K690.4 \]

**SOLUTION FIVE**

(a) **BANANA PROJECT**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CASH</th>
<th>DF</th>
<th>CASH x DF</th>
<th>PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500</td>
<td>1.17^{-1} = 0.8547</td>
<td>500 x 0.8547</td>
<td>427.35</td>
</tr>
<tr>
<td>2</td>
<td>900</td>
<td>1.17^{-2} = 0.7305</td>
<td>900 x 0.7305</td>
<td>657.45</td>
</tr>
<tr>
<td>3</td>
<td>400</td>
<td>1.17^{-3} = 0.6244</td>
<td>400 x 0.6244</td>
<td>249.76</td>
</tr>
<tr>
<td>4</td>
<td>600</td>
<td>1.17^{-4} = 0.5337</td>
<td>600 x 0.5337</td>
<td>320.22</td>
</tr>
</tbody>
</table>

\[ \Sigma PV = 1654.78 \]

\[ \text{NPV} = \Sigma PV - \text{Cost} = 1654.78 - 1400 = K254.78 \]

(b) **ORANGE PROJECT**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CASH</th>
<th>DF</th>
<th>CASH x DF</th>
<th>PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>700</td>
<td>1.17^{-1} = 0.8547</td>
<td>700 x 0.8547</td>
<td>598.29</td>
</tr>
<tr>
<td>2</td>
<td>800</td>
<td>1.17^{-2} = 0.7305</td>
<td>800 x 0.7305</td>
<td>584.4</td>
</tr>
<tr>
<td>3</td>
<td>600</td>
<td>1.17^{-3} = 0.6244</td>
<td>600 x 0.6244</td>
<td>374.64</td>
</tr>
<tr>
<td>4</td>
<td>900</td>
<td>1.17^{-4} = 0.5337</td>
<td>900 x 0.5337</td>
<td>480.33</td>
</tr>
</tbody>
</table>

\[ \Sigma PV = 2037.66 \]

\[ \text{NPV} = 2037.66 - 1400 = K637.66 \]

Jose investor must choose Orange project.
(b)

\[ r = \frac{n \Sigma xy - \Sigma x \Sigma y}{\sqrt{n \Sigma x^2 - (\Sigma x)^2} \sqrt{n \Sigma y^2 - (\Sigma y)^2}} \]

<table>
<thead>
<tr>
<th>x</th>
<th>x^2</th>
<th>y</th>
<th>y^2</th>
<th>xy</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>100</td>
<td>50</td>
<td>2500</td>
<td>500</td>
</tr>
<tr>
<td>13</td>
<td>169</td>
<td>70</td>
<td>4900</td>
<td>910</td>
</tr>
<tr>
<td>14</td>
<td>196</td>
<td>82</td>
<td>6724</td>
<td>1148</td>
</tr>
<tr>
<td>16</td>
<td>256</td>
<td>75</td>
<td>5625</td>
<td>1200</td>
</tr>
<tr>
<td>17</td>
<td>289</td>
<td>65</td>
<td>4225</td>
<td>1105</td>
</tr>
<tr>
<td>18</td>
<td>324</td>
<td>40</td>
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<td>24</td>
<td>576</td>
<td>90</td>
<td>8100</td>
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\[ \Sigma x = 175 \quad \Sigma x^2 = 3235 \quad \Sigma y = 704 \quad \Sigma y^2 = 51816 \quad \Sigma xy = 12624 \]

\[ r = \frac{10 \times 12624 - 175 \times 704}{\sqrt{(10 \times 3235 - 175^2)(10 \times 51816 - 704^2)}} \]

\[ r = \frac{126240 - 123200}{\sqrt{(32350 - 30625)(51816 - 495616)}} \]

\[ = \frac{3040}{\sqrt{(1725)(22544)}} \]

\[ = \frac{3040}{\sqrt{38888400}} \]

\[ = \frac{3040}{6236.06} \]

\[ = 0.48748 = 0.49. \]
SOLUTION SIX

(a) \( P(K) = 0.25 \) \( P(D) = 0.25 \) \( P(C) = 0.25 \) \( P(B) = 0.25 \)

\[ P(F/K) = 0.6 \] \( P(F/D) = 0.56 \) \( P(F/C) = 0.75 \) \( P(F/B) = 0.7 \)

\[ P(C/F) = \frac{P(C \cap F)}{P(F)} \]

\[ = \frac{P(C)P(F)}{P(K \cap F) + P(D \cap F) + P(C \cap F) + P(B \cap F)} \]

\[ = \frac{P(C)P(F)}{P(K)P(F) + P(D)P(F) + P(C)P(F) + P(B)P(F)} \]

\[ = \frac{0.25 \times 0.75}{0.25 \times 0.6 + 0.25 \times 0.56 + 0.25 \times 0.75 + 0.25 \times 0.7} \]

\[ = \frac{0.1875}{0.15 + 0.14 + 0.1875 + 0.175} \]

\[ = \frac{0.1875}{0.6525} \]

\[ = 0.2874 \]

(b) SALE VALUE \quad p (SV) \quad \% \quad CUM\% \quad RANDAM NO INTERVAL

<p>| | | | |</p>
<table>
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<th></th>
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<td>0.20</td>
<td>20</td>
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</tr>
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</table>

DAY \quad R.NO \quad SALE VALUE (K)

| 1 | 40 | 20000 |
| 2 | 25 | 10000 |
| 3 | 76 | 30000 |
| 4 | 80 | 40000 |
| 5 | 55 | 20000 |
| 6 | 64 | 20000 |
| 7 | 38 | 10000 |

END OF SOLUTIONS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:

   Section A: Ten (10) compulsory multiple choice questions.

   Section B: Any two (2) of three (3) optional questions on Microeconomics.
               Any two (2) of three (3) optional questions on Macroeconomics.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – (COMPULSORY)

Attempt all ten (10) multiple choice questions

QUESTION ONE

1.1 Which one of the following accurately describes the opportunity cost of producing Good X?

A. The cost of producing Good X in money terms.
B. The foregone output from the next best alternative use to which factors of production used to produce Good X could be put.
C. The stream of services provided by Good X over its entire lifetime.
D. The production of Good X foregone in the previous year to enable Good X to be produced this year.

(2 marks)

1.2 Which of the following events would shift the demand curve for good Q to the left?

A. An increase in the price of Good Q
B. An increase in the price of a substitute good.
C. An increase in the price of a complementary good.
D. An increase in consumer income.

(2 marks)

1.3 According to the principle of diminishing marginal utility the total satisfaction that a consumer receives from consuming Good R will:

A. Rise at an increasing rate as the consumption of Good R increases.
B. Rise at a decreasing rate as the consumption of Good R increases.
C. Fall at an increasing rate as the consumption of Good R increases.
D. Fall at a decreasing rate as the consumption of Good R increases.

(2 marks)

1.4 Which statement is TRUE?

A. There are no fixed costs in the long run.
B. Fixed costs depend on the firm’s level of output.
C. Fixed costs are zero if the firm is producing nothing.
D. Fixed costs are the difference between total costs and average variable costs.

(2 marks)
1.5 In a perfectly competitive market, the typical firm cannot affect the price of its output, and so it maximises profits or minimises losses when marginal cost is:

A. Less than the price.
B. Greater than the price.
C. Equal to the price.
D. Less than average variable cost. (2 marks)

1.6 John, a car mechanic from Lusaka has no job because his company has been relocated to Mansa. Since then he has been frantically looking for a job, going to the agencies every single day. John is part of the ____.

A. cyclical unemployment figures
B. frictional unemployment figures
C. structural unemployment figures
D. regional unemployment figures (2 marks)

1.7 In a closed economy with no government, which of the following will occur when the economy is in equilibrium?

A. \( S = I \)
B. \( C = Y \)
C. \( S = C \)
D. \( AE = C + I + S \) (2 marks)

1.8 The \( AS/AD \) model studies the relationship between

A. The price level and unemployment.
B. The price level and real GDP.
C. Unemployment and real GDP.
D. Nominal GDP and inflation. (2 marks)
1.9 All other things being equal which of the following events would cause the value of Country A’s currency to appreciate against the value of Country B’s currency?

A. A fall in the interest rate of Country A with an even bigger fall in Country B’s interest rate.
B. A fall in the interest rate of Country A with constant interest rate in Country B.
C. A rise in the interest rate of Country A with an even bigger rise in Country B’s interest rate.
D. A fall in the interest rate of Country A with a rise in the interest rate of Country B.

(2 marks)

1.10 The adoption of a policy to reduce the government’s budget deficit will involve:

A. An increase in aggregate demand and a reduction in real output.
B. An increase in aggregate demand and an increase in real output.
C. A reduction in aggregate demand and a reduction in real output.
D. A reduction in aggregate demand and an increase in real output.

(2 marks)

[Total: 20 Marks]
SECTION B

This section has two parts: Part 1. Microeconomics and Part 2, Macroeconomics

1. MICRO ECONOMICS: Attempt TWO (2) questions out of the THREE (3) QUESTIONS: TWO, THREE AND FOUR

QUESTION TWO

(a) Explain the effects of the following events on the demand curve for air transportation between Lusaka and Ndola:

(i) A significant increase in the income of households in Lusaka and Ndola. (2 marks)

(ii) A fall in the cost of a bus ticket between Lusaka and Ndola. (2 marks)

(iii) The price of an airline ticket for that route decreases. (2 marks)

(b) Describe and graphically show short-run and long-run equilibrium positions for a firm operating in a perfectly competitive market structure. (10 marks)

(c) How does an import tariff differ from an import quota? (4 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Outline any two (2) determinants of demand and any two (2) determinants of supply. (8 marks)

(b) The market demand curve (Qd) and supply curve (Qs) of Good R are given by the following equations:

\[ Qd = 120 - 2P \]
\[ Qs = 2P \]

Where \( P \) is the price in kwacha, Qd is demand and Qs is supply.
(i) Calculate the market equilibrium price and quantity. (1 mark)

(ii) Calculate the market equilibrium price and quantity if a sales tax of K10 per unit is imposed on Good R. (2 marks)

(iii) Calculate the total tax revenue raised by the sales tax. (2 marks)

(c) Calculate the following elasticities:

(i) Given that the price elasticity of demand for beer is –2. If beer increases in price by 15 per cent calculate the fall in the quantity demanded. (2 marks)

(ii) A consumer spends K200 monthly on Product A when its price is K2 and continues to spend K200 monthly when its price increases to K2.50. Calculate the consumer’s price elasticity of demand. (3 marks)

(iii) List two uses (2) for price elasticity of demand. (2 marks)

[Total: 20 Marks]

QUESTION FOUR

BX Limited is a manufacturing company. The company wants to minimize the cost of production in order to maximize profit and increase its market share. The total cost of zero output is K150,000. The table below gives additional information for BX Ltd.

<table>
<thead>
<tr>
<th>TOTAL OUTPUT units</th>
<th>Sales price per unit (AR) K’000</th>
<th>TR K’000</th>
<th>TC K’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>1</td>
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<td>500</td>
<td>200</td>
</tr>
<tr>
<td>2</td>
<td>470</td>
<td>940</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>430</td>
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<td>850</td>
</tr>
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<td>4</td>
<td>400</td>
<td>1600</td>
<td>1250</td>
</tr>
<tr>
<td>5</td>
<td>350</td>
<td>1750</td>
<td>1450</td>
</tr>
</tbody>
</table>

(a) Define Marginal Revenue (MR)? (3 marks)

(b) At what output level and price would the firm maximize its profit? (9 marks)

(c) Calculate the maximum profit referred to in (b) above? (3 marks)

(d) With the aid of a diagram explain the fact that the MC curve will always cut the AC curve where its minimum point? (5 marks)

[Total: 20 Marks]
MACRO ECONOMICS

ATTEMPT ANY TWO (2) QUESTIONS OUT OF THE THREE (3) QUESTIONS: FIVE, SIX AND SEVEN

QUESTION FIVE

(a) Describe three (3) ways in which financial intermediaries are essential to the efficient operation of the economy. (6 marks)

(b) Distinguish a *government deficit* from *government debt*. (4 marks)

(c) Consider the following information about an open economy: Consumption (C) = 15,000 + 0.4Yd; Disposable income (Yd) = Y – T; Taxes (T) = 0.3Y; Government spending (G) = 4,500; Investment (I) = 3,000; Exports = 6,000; and Imports = 1,500 + 0.2Y.

(i) Determine the equilibrium income (Y) for this economy with the condition that injections (J) equal withdrawals (W). (4 marks)

(ii) Write the aggregate demand (AD) function/equation. (3 marks)

(iii) By how much will equilibrium income change if exports rise to 9,500? (2 marks)

(iv) Will the change in equilibrium income be an increase or decrease? (1 mark)

[Total: 20 Marks]

QUESTION SIX

(a) Describe any two (2) consequences of inflation and deflation. (4 marks)

(b) Use the quantity theory of money to show how inflation is triggered in the economy. (4 marks)

(c) Explain how monetary policy can be used to control inflation. (4 marks)

(d) Describe four (4) types of unemployment. (8 marks)

[Total: 20 Marks]
QUESTION SEVEN

(a) Explain any two (2) reasons for trade restriction. (4 marks)

(b) Describe the following stages of economic integration:

(i) Customs union (2 marks)
(ii) Common market (2 marks)
(iii) Economic and monetary union (2 marks)

(c) Outline any two (2) advantages of a fixed exchange rate regime (4 marks)

(d) Suppose that under a fixed (or managed) exchange system, Zambia strives to keep the value of its Kwacha artificially low. Illustrate with a graph of the foreign exchange market, how the Bank of Zambia can do this. (6 marks)

[Total: 20 Marks]

END OF PAPER
DA 3 BUSINESS ECONOMICS SOLUTIONS

SOLUTION ONE

1.1 B  
1.2 C  
1.3 B  
1.4 A  
1.5 C  
1.6 C  
1.7 A  
1.8 B  
1.9 A  
1.10 C

SOLUTION TWO

(a)  
(i) Individuals will travel more since they have more disposable income. The demand for air transportation between Lusaka and Ndola increases; the demand curve shifts up and to the right.

(ii) The cost of an alternative mode of transportation between Lusaka and Ndola has decreased; thus, more individuals will travel by bus between Lusaka and Ndola. The demand for air transportation decreases; the demand curve shifts down and to the left.

(iii) There is no shift, but there is a movement down the existing demand curve; the lower price for an airline ticket results in an increase in the number of people traveling (quantity demanded) by air between Lusaka and Ndola.

(b) **Short-run**  
In the short-run a perfect competitor can earn abnormal profits and produce output at a level where profit is maximised. That is at a level of output where marginal revenue is equal to marginal cost.

The optimum or best level of output is that level of output which is produced at the lowest level of the average total cost. It is best because operational costs are at the lowest level. The graph below shows a perfectly competitive firm in short-run equilibrium.
**Long-run**
Abnormal profits cannot persist in the long run because other firms will be attracted to enter the industry. As new firms come in, total supply will increase and this will bring down the market price.

The market price will fall until the abnormal profits disappear. In the long run the profits maximised are only normal profits due to competition. Individual firms will operate at a level where the average revenue is equal to the average total cost. The graph below shows a perfectly competitive firm in long-run equilibrium.

(c) *An import tariff* is a tax on the imported commodity. *An import quota* is a quantitative restriction on the amount of a good that may be imported during a given period.
SOLUTION THREE

a) Determinants of demand and supply

Demand

- **Change in consumer incomes**: an increase in income shifts the demand curve to the right for normal goods (shifts to the left for inferior goods), allowing the consumer to purchase more goods. Correspondingly, a decrease in income shifts the demand curve to the left for normal goods (and to the right for inferior goods).
- **Population change**: An increase in population shifts the demand curve to the right. Demand for goods increases even if the prices are unchanged. Alternatively, demand for goods falls in areas with declining populations.
- **Consumer preferences**: If the preference for a particular good increases, the demand curve for that good shifts to the right and vice versa.
- **Prices of related goods**: If prices of related goods change, the demand curve for the original good can change as well. Related goods can either be substitutes or complements.

Supply

- **Change in input costs**: An increase in input costs shifts the supply curve to the left. Conversely, if input costs decline, firms respond by increasing output.
- **Increase in technology**: An increase in technology shifts the supply curve to the right. With the advancement of technology, the supply curve for goods and services shifts to the right.
- **Change in size of the industry**: If the size of an industry grows, the supply curve shifts to the right. In short, as more firms enter a given industry, output increases even as the price remains steady. Conversely, the supply curve shifts to the left as the size of an industry shrinks.

b) equilibrium

i) The equilibrium price is obtained from the equilibrium condition Qd = Qs
   \[120 - 2P = 2P\]
   Hence 4P = 120
   \[P = 30\]
   Equilibrium quantity = 2 \times 30 = 60 units

ii) The sales tax (t) affects the supply curve:
   \[Qs = 2P^*\]
   Where \(P^* = P - t = P - 10\)
   The price received by the producer after the sales tax is paid is \(P^*\) which is \(P - 10\):
   \[Qs = 2P^* = 2(P - 10) = 2P - 20\]
   We need Qd = Qs
   \[120 - 2P = 2P - 20\]
   4P = 140
   Hence the new equilibrium price is K35
   The new equilibrium quantity is 120 - 2 \times 35 = 50 units

iii) The tax revenue raised = units sold \times tax per unit = 50 \times K10 = K500.
c) Price elasticity

i) \[ \text{Ped} = \frac{\% \text{ change in qtyd}}{\% \text{ change in price}} \]

\[ -2 \cdot \frac{x}{15} = -2(15) = -30 \]

Quantity demanded for beer reduces by 30 percent

ii) \[ \text{Ped} = \frac{\% \text{ change in qtyd}}{\% \text{ change in price}} \]

\[ \frac{80-100}{100} \cdot \frac{2.5-2}{2} = 0.8 \]

iii) Uses of price elasticity of demand

- If the demand for the good produced by a firm is price elastic, the firm can decrease its price to increase its total revenue as its quantity demanded will increase by a larger percentage.
- If the demand for the good produced by a firm is price inelastic, the firm can increase its price to increase its total revenue as its quantity demanded will decrease by a smaller percentage.
- If the demand for the good produced by a firm is unit price elastic, the firm cannot change its price to increase its total revenue as its quantity demanded will change by the same percentage.

SOLUTION FOUR

(a) Marginal Revenue (MR) is the addition to total revenue earned from the sale of one extra unit of output.
(b) At output 3, \[ MR = TR_3-TR_2 = 1290-940 = 350 \]
\[ MC = TC_3-TC_2 = 850-500 = 350 \]

Condition for profit maximization \( MR = MC = K350,000 \) and
Price = \( AR = K430,000 \) per unit corresponding to 3 unit of output
(c) At output = 3 unit \( TR-TC = 1290-850 = 440 \) where \( MR = MC \) profit maximization condition

Maximum profit = K440,000
T is the minimum point for AC curve where MC curve cuts. Where the MC is less than the AC then the average cost will fall, but once marginal exceeds average , the average will start to rise.

**SOLUTION FIVE**

(a) An economic system is judged efficient when it achieves maximum use of economic resources and maximum satisfaction of consumer wants. Financial instruments and institutions generate efficiency in the following ways:

- The financial system increases consumer satisfaction by facilitating the allocation of spending over time. It allows some units to spend more than their current income (dissave) and allows other spending units to increase their future spending level by earning interest on the money they have saved.
- The creation of safe and liquid financial claims by financial intermediaries reduces the likelihood that some savers will hold money balances idle. By rechanneling savings into the circular flow, spending flows are stabilised. This in turn stabilises employment and economic activity.
- Financial instruments encourage savers to lend their savings to those who want to spend more than their current money inflow. A large portion of the funds borrowed from savers is used by business firms to add to the economy’s capital stock. This increases productive capacity.
- Since the profit motive guides the operation of financial institutions, money saving is distributed to those capital uses that have the greatest productivity.

(b) A government deficit exists when government outlays exceed its tax revenues. A structural deficit is one that exists when output is at its full-employment level while a cyclical deficit is the amount of the deficit that is attributable to output being below its full-employment level. On the other hand, public debt is the amount of interest-bearing debt issued by the government at a given point in time and arises from previous yearly deficits.
(c)

(i) \( W = J \) at equilibrium
\[
S + T + M = I + G + X, \text{ where } S \text{ is saving and } T \text{ is Taxes.}
\]
\[
S = Y_d - C
\]
\[
S = 0.7Y - (15,000 + 0.28Y)
\]
\[
S = 0.7Y - 15,000 - 0.28Y
\]
\[
S = 0.42Y - 15,000
\]

Therefore, from the information provided, given that \( T = 0.3Y \),
\[
S + T + M = I + G + X
\]
\[
0.42Y - 15,000 + 0.3Y + 1,500 + 0.2Y = 3,000 + 4,500 + 6,000
\]
\[
0.92Y = 27,000
\]
\[
Y = 29,347.83
\]

(ii) \( AD = C + I + G + (X - M) \)
\[
AD = 15,000 + 0.4Y_d + 3,000 + 4,500 + [6,000 - (1,500 + 0.2Y)]
\]
\[
AD = 15,000 + 0.4Y_d + 3,000 + 4,500 + 6,000 - 1,500 - 0.2Y
\]
\[
AD = 27,000 + 0.28Y - 0.2Y
\]
\[
AD = 27,000 + 0.08Y
\]

(iii) The increase in exports means that the \( AD \) function now becomes \( AD = 30,500 + 0.08Y \).
At equilibrium \( Y = AD \), so the new equilibrium becomes:
\[
Y = 30,500 + 0.08Y
\]
\[
0.92Y = 30,500
\]
\[
Y = 33,152.17
\]

The change in equilibrium income is 33,152.17 – 29,347.83 = 3,804.34

(iv) The change in equilibrium income will be an increase which shows that if aggregate demand increases, national output and income will also increase.

SOLUTION SIX

a) Inflation and deflation
Inflation is harmful because:
- it wipes out the value of people’s savings;
- it hurts people on fixed incomes;
- it redistributes wealth from creditors to debtors;
- it creates uncertainty, making financial planning for the future more difficult.

Deflation is a problem because:
- it redistributes wealth from debtors to creditors,
- it creates menu costs; it creates uncertainty, making financial planning for the future more difficult;
• and it can lead to cutbacks in borrowing and spending, which can slow down the economy.

b) The quantity theory of money

The quantity theory of money assumes that the income velocity of money, V, is constant. \( MV = PT \)

The quantity theory of money states that there is a direct relationship between the quantity of money in an economy and the level of prices of goods and services sold. According to QTM, if the amount of money in an economy doubles, price levels also double, causing inflation (the percentage rate at which the level of prices is rising in an economy). The consumer, therefore, pays twice as much for the same amount of the good or service. Essentially, the theory’s assumptions imply that the value of money is determined by the amount of money available in an economy. An increase in money supply results in a decrease in the value of money because an increase in money supply causes a rise in inflation.

c) Constructional monetary policy

The goal of a constructional policy is to reduce the money supply within an economy by decreasing bond prices and increasing interest rates. This helps reduce spending because when there is less money to go around, those who have money want to keep it and save it, instead of spending it. It also means that there is less available credit, which can also reduce spending. There are three main ways to carry out a constructional policy.

• The first is to increase interest rates through the central bank. So, when the central bank increases its interest rate, banks have no choice but to increase their rates as well. When banks increase their rates, less people want to borrow money because it costs more to do so. So, spending drops, prices drop and inflation slows.
• The second method is to increase reserve requirements on the amount of money banks are legally required to keep on hand to cover withdrawals. The more money banks are required to hold back, the less they have to lend to consumers. If they have less to lend, consumers will borrow less, which will decrease spending.
• The third method is to directly or indirectly reduce the money supply by enacting policies that encourage reduction of the money supply.
• The forth method is the central bank to sell government securities on the open market (OMO). When individuals and firms pay for the government securities they end up with less money in their hands hence reduction of the money supply

d) Types of unemployment

Frictional Unemployment: Frictional unemployment is when workers leave their old jobs but haven’t yet found new ones. Most of the time workers leave voluntarily, either because they need to move, or they’ve saved up enough money to allow them to look for a better job.

Frictional unemployment also occurs when students are looking for that first job, or when mothers are returning to the workforce. It also happens when workers are fired or, in some cases, laid off due to business-specific reasons, such as a plant closure.

Frictional unemployment is short-term and a natural part of the job search process.
**Structural Unemployment:** This type of unemployment arises through a change in demand which switches production from one kind of work to another, it occurs through permanent or long-term changes in the structure of the economy. In other words, structural unemployment is long-term unemployment caused by the decline of certain industries and changes in production process.

**Cyclical Unemployment:** This type of unemployment arises from the business cycle. Keynes was mainly concerned with this type of unemployment. Such unemployment occurs due to deficiency of demand or purchasing power and is also called demand-deficient unemployment, meaning, it affects all industries at the same time. Since this type of unemployment is due to downturn in economic activity, it can, therefore, be expected to occur and disappear at fairly regular intervals.

**Seasonal Unemployment:** This type of unemployment occurs due to seasonal pattern of demand and the consequent seasonal nature of activities in some industries. In some industries like entertainment, tourism and soft drink, the demand for goods and services fluctuates seasonally. As a result these industries are fully staffed in the peak season but many workers are laid off in the off-season.

**Classical unemployment:** Classical unemployment is also known as “real wage unemployment” or “induced unemployment.” It’s when wages are higher than the laws of supply and demand would normally dictate. It usually occurs in three situations:

1. Unions negotiate higher salaries and benefits.
2. Long-term contracts set a wage that has become too high due to a recession.
3. The government sets a minimum wage that's too high.

The result is that companies must pay more per employee, so they can afford fewer employees. Those that are laid off are victims of classical unemployment.

**SOLUTION SEVEN**

a) Arguments in favor of trade restrictions include:

- **National Defense** - Foreign producers should not be relied upon for production of defense goods, even if the goods can be produced at a lower cost abroad.
- **Infant Industries** - Start-up industries in a country may not be able to effectively compete against foreign producers because of their small size. An argument can be made that these industries should be protected until suitable economies of scale can be achieved.
- **Anti-Dumping** - The claim is often made that foreign producers "dump" their goods on the domestic market.
- **Job Protection** - The desire to maintain existing jobs threatened by foreign competition is probably the single most important source of today’s protectionist policies. Some industries that at one time had a comparative advantage are no longer among the world’s lowest-cost producers; they struggle to stay afloat. Cost cutting leads to layoffs, and layoffs lead to demands for protection.
b) **Stages of economic integration**

- **Customs Union;** A customs union (CU) builds on a free trade area by, in addition to removing internal barriers to trade, also requiring participating nations to harmonize their external trade policy.

- **Common Market;** A common market represents a major step towards significant economic integration. In addition to containing the provisions of a customs union, a common market (CM) removes all barriers to the mobility of people, capital and other resources within the area in question, as well as eliminating non-tariff barriers to trade, such as the regulatory treatment of product standards.

- **Economic Union;** The deepest form of economic integration, an economic union adds to a common market the need to harmonize a number of key policy areas. Most notably, economic unions require formally coordinated monetary and fiscal policies as well as labour market, regional development, transportation and industrial policies. An economic union frequently includes the use of a common currency and a unified monetary policy.

c) **Advantages of fixed exchange rates**

- A fixed exchange rate provides currency stability. Investors always know what the currency is worth.

- As exchange rate remains unchanged for a fairly long period of time, people expect that such rate would not change in the immediate future. This then eliminates speculation in the foreign exchange market.

- A fixed exchange rate imposes economic disciplines on countries experiencing BoP problems.

d) ![Graph](image)

To intervene, the central bank can buy or sell currency through its interbank market. The Bank of Zambia can, therefore, increase the supply of the Kwacha to keep its value low.

**END OF SOLUTIONS**
DIPLOMA IN ACCOUNTANCY PROGRAMME EXAMINATIONS

LEVEL ONE

DA 4: INFORMATION TECHNOLOGY AND COMMUNICATION

WEDNESDAY 13 JUNE 2018

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:


   Section B: There are three (3) questions on Information Technology. Attempt any two (2) questions.
   There are also three (3) questions on Communication. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. Cell Phones are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – (COMPULSORY)

Attempt all ten (10) multiple choice questions

QUESTION ONE

Each of the following questions has only one correct answer. Write the letter of the correct answer you have chosen.

1.1 Which one of the following is NOT an excel formulae?

A. =C4*5
B. =(B4-B5+B6)/2
C. E6 + E7
D. =E4/E5 (2 marks)

1.2 Which of the following is NOT a system software

A. Operating system
B. Database management System
C. Bespoke software
D. Utility software (2 marks)

1.3 The central processing unit (CPU) is made up of:

A. the arithmetic and logic units and output devices
B. the control unit and the arithmetic and logic unit
C. input devices, output devices and backing store
D. all of the above (2 marks)

1.4 Which one of the following is an example of management information rather than routine operating information?

A. a goods received note
B. a customer statement
C. a despatch note
D. an expenditure variance analysis report (2 marks)
1.5 Which one of the following best describes Internet of Things (IOT)?

A. It is a connection of people over a long distance
B. It is anything with capability to store and process data and connected to other things with similar capability using internet protocol
C. It is an interconnection of wires creating a Mesh
D. It is an interconnection of emails programs to each other (2 marks)

1.6 Which of the following non-verbal communication provide a rich source in conveying emotions?

A. Posture
B. Clothing
C. Gestures
D. Facial expression (2 marks)

1.7 Which of the following channel of communication is widely used in the world today?

A. Written
B. Oral
C. Non-verbal
D. E-mail (2 marks)

1.8 Why is listening skill important in communication?

A. To make assumptions
B. To make the speaker uncomfortable
C. To get all the needed information
D. To assist the speaker to make an explanation (2 marks)

1.9 Which of the following is correct about “structure” in the PASS frame work?

A. The objective of communication must be clear
B. The order and the layout of the content must be clear
C. The audience must clearly understand the message
D. The message must be clear (2 marks)
1.10 What is an agenda?

A. A list of programme to be followed during a meeting
B. A meeting document
C. A list of topics to be followed during the meeting
D. A list of topics and programme to be followed during the meeting (2 marks)

[Total: 20 Marks]
SECTION B

This section has two parts: 1. INFORMATION TECHNOLOGY
2. COMMUNICATION

1. INFORMATION TECHNOLOGY

ATTEMPT ANY TWO (2) FROM QUESTIONS: TWO, THREE AND FOUR

QUESTION TWO

(a) Briefly explain the term accounting information system to your manager. (6 marks)

(b) Briefly explain six (6) benefits of the computerised accounting information system (6 marks)

(c) Briefly explain classification of computers (8 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Explain what a database is and its use (4 marks)

(b) Explain any four (4) security threats in Information Systems (8 marks)

(c) State any four (4) advantages of using databases in an organisation (8 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) State any three (3) main business functions of the computerised accounting information system. (9 marks)

(b) Electronic Point Of Sale (EPOS) systems provide a powerful aid in transactions e.g. supermarkets such as Shoprite or Pick and Pay.

   Explain how EPOS systems work in practice. (8 marks)

(c) Briefly explain three advantages of a peer-to-peer network. (3 marks)

[Total: 20 Marks]
2. COMMUNICATION

ATTEMPT ANY TWO (2) FROM QUESTIONS: FIVE, SIX AND SEVEN

QUESTION FIVE

You are a supervisor in accounts departments; you will be holding a meeting in a couple of weeks. However, you have realised that you will be having another meeting at the same time, therefore you have decided to delegate to your junior officer to conduct the meeting on your behalf

Required:

(a) Write a memo to your subordinate giving him/her five (5) hints/tips on how to organize meetings. (15 marks)

(b) Explain the following meeting types of minutes

(i) Narrative

(ii) Verbative

(iii) Resolution

(iv) Action

(v) Narrative and Verbative (5 marks)

[Total: 20 Marks]

QUESTION SIX

A report is a formal document that provides information an investigation, facts or incidents that took place

Required:

Explain the following parts of a formal report

(i) Terms of reference (4 marks)

(ii) Procedure (4 marks)

(iii) Findings (4 marks)

(iv) Conclusions (4 marks)

(v) Recommendations (4 marks)

[Total: 20 Marks]
QUESTION SEVEN

A new on-line order entry system is currently being developed in your organisation. As part of the implementation procedures, users of the new system will require a number of training activities. Remembering the attributes of clear and effective communication that you learnt during your course of study in college, you have decided to use the *six (6) C’s; the PASS and the KISS model* so that you can easily achieve effective communication during training.

Required:

Explain with relevant examples where applicable how the three (3) models (6 C’s, KISS and PASS) can work to achieve effective communication during training.

[Total: 20 Marks]
DA 4 INFORMATION TECHNOLOGY & COMMUNICATION SOLUTIONS

SOLUTION ONE

1.1 C E6 + E7
1.2 C Bespoke software
1.3 B the control unit and the arithmetic and logic unit
1.4 D an expenditure variance analysis report
1.5 B It is anything with capability to store and process data and connected to
other things with similar capability using internet protocol
1.6 D Facial expressions
1.7 D E-mails
1.8 C To get all the needed information
1.9 B The order and the layout of the content must be clear
1.10 C A lists of topics to be discussed during the meeting

SOLUTION TWO

a) Accounting Information System is a practice of accounting with design, implementation and
monitoring of accounting information system with the use of information technology in order
to provide the user with financial information necessary to manage the organisation.

It combines accounting principles and concepts with the benefits of an information system.

An AIS is used to analyse and record business transactions for the purpose of providing
accounting data and information to users and the preparation of accounting statements.

b) Six (6) benefits of the computerised accounting information system are as follows:

- **Accuracy of processing business transaction.** It reduces error of input due
  arithmetic calculations and mis-posting from journals
- **Speed of processing of business transactions.** There is timely processing of
  large business transaction as opposed to manual processing.
- **Automation of data at input** It is faster as opposed to entering data manually;
  example of such automation at input could be the use of bar code reader.
- **Reduction in Labour cost** the automation can significantly reduce the number of
  staff working on the financial transactions
• **Integration of information** is possible between different computerised information system which require data to be shared among these system

• **Effective management decision** due accurate information from the system

c) Briefly explain classification of computers

i) **Mainframe computer:** is a large and powerful computer capable of supporting thousands of users. They are found in large organisations, like banks, used for bulky data processing such as financial transaction processing, census etc.

ii) **Super Computer:** is the fastest type of computer that is used for specialised applications that require immense amount of mathematical calculations taking millions of variables at the same time. Weather forecasting, petroleum exploration, nuclear energy research, are some of the areas where super computers are used.

iii) **Mini Computer:** Smaller compared to the mainframe but capable of supporting hundreds of users the simultaneously. Mostly found in medium organisations used as central server managing networks

iv) **Micro Computers:** Are a small single user computer based on a microprocessor. Micro computers are designed to meet the computing needs of an individual and thus are referred to as Personal Computers (PC)

**SOLUTION THREE**

a) A database is an integrated collection of logically related records or files consolidated into a common pool that provides data for one or more multiple users. It’s a central collection of logically structured data that may serve a number of applications without its structure being dictated by any one i.e. programs are written around the database rather than files being structured to meet the needs of specific programs.

**Its use:**

- To store and handle data such as customer details for a business
- Database content is easy to manage
- Information can be accessed and updated quickly and efficiently
b) Security threats to Information Systems include:

- **Hacking** – unauthorised access of the Information System by outsiders
- **Eavesdropping** – interception of data as it is being transmitted on the network by unauthorised people.
- **Denial of Service attacks** – this is where system resources are made unavailable for its legitimate users by an attacker. The attacker may constantly flood the system with messages that keep it busy.
- **Viruses/malware** – this is a rogue computer program that infects the computer and corrupts its files.

c) Databases have a number of advantages to organisations including:

- They provide Centralised storage of data
- All the users have access to the same data
- Reduces inconsistencies on the data
- Reduces duplication of data
- Saves on the amount of storages since there is only one copy of the data

**SOLUTION FOUR**

a)  

- Able to capture and store data about organisation activities, resources and personnel
- Capacity to transforms data into information for decision making and monitoring and control. It is able to analyse business transactions. The system has a facility which allows the user to extract data and process it into information.
- Able to provide controls to safeguard the organisation asset, data to ensure availability of such data including accuracy and reliable.

b) In a typical EPOS system, the retailer's cash register is replaced by a computer terminal which retains the features of a cash register, but includes an electronic link to the retailer's computer and incorporates one of a bar code reader. Goods in the store are all coded with a unique bar code. For each code used, a master file on the store's computer holds the selling price per item and other relevant data. When a customer presents goods for purchase, the cashier or checkout operator reads the bar code, the code data is transmitted electronically to the computer, which transmits the selling price, and a product description for automatic inclusion
on the customer's receipt. The computer updates stock and sales accounting records at the same time.

c) Three (3) advantages of a peer-to-peer network
   - No need for a specialised skills of network administration
   - Network is fast and inexpensive
   - Each PC can make a backup copies of its data to other PCs for security

SOLUTION FIVE

(a)

MUSEKWA ENTERPRISE

MEMORANDUM

Ref: MUS/102/18
Date: (Any date during the exam time)
TO: The Assistant Accountant
FROM: The Finance Manager
SUBJECT: TIPS ON HOW TO ORGANIZE A MEETING:

This serves to inform you that you are requested to conduct a departmental meeting on behalf of the office of the Finance Manager. This is due to the fact that the Finance Manager will be out of office for other important assignments at the time the departmental meeting will be held. For the smooth running of the meeting the following tips can be used to assist you to organize the meeting:

- Decide on the objective or outcomes of the meeting
- Prepare an agenda so that the staff fore see about what is to be discussed
- Distribute other meeting documents such as notice and minutes
- Insist that the meeting start on time
- Insist that participants regards each other’s points rather than reiterating their own
- Try to get agreement and consensus and sum up any decision made
It is hoped that the above tips will assist you organize an effective meeting

Signature

T. Phiri

Note that marks were awarded for candidates who included any of the following tips on how to organize meetings in answering question five (a) and any other correct responses.

- Decide if a physical or a video conference meeting is needed that can save time and money
- Decide who has to be there, The more people who attend, the higher the cost and the longer they take as everyone wants to participate
- Ensure that every one has an opportunity to participate
- Ensure that minutes are written and distributed promptly through the secretary.

(b)

(i) **Narrative minutes** describe the debate of a meeting. They describe the impression in the meeting. At times they involve emotions and moods of participants.

(ii) **Resolutions states** - the decisions reached upon during the meeting (for example, a minute recording, the board’s agreement

(iii) **Verbative** are like transcripts of conversation and are a record of every word said at a meeting (They are taken as word for word statements)

(iv) **Action minutes** – They are a type of resolution minutes except that they have action columns which indicate assigned tasks and responsible offices on the right hand margin of the paper

(v) **Narrative and verbative** - minutes are often later presented in meetings where matters can be further discussed and decisions taken
SOLUTION SIX

TERMS OF REFERENCE:

The term of reference for a report spells out the instructions that the writer of the report must follow from someone who has requested him or her to write that report. It also spells out the purpose or the objectives or why that report must be written. When is it needed? Any recommendation required?

PROCEDURE/METHODOLOGY:

These are stages the writer of the report must follow when carrying out an investigation, or the process of carrying out an investigation in writing a report. Examples include; interviews, observations, consultations, questionnaires etc.

FINDINGS:

These are facts found in the field (information that is discovered by the writer of the report after carrying out an investigation). This could also be opinions that the writers of the report form after doing or carrying out an investigation. They also form the main body of the report. Information is arranged in sectional headings and in logical order for clarity.

CONCLUSION:

These part summaries the main findings of the report. it can be an opinion, a remark, or comments. The writers of the report decide whether the findings of the investigations are true or not after carefully examining the evidence.

RECOMMENDATIONS;

These are simply suggestions or the solutions that the writer of the report believes that once they are applied the problem would be solved or reduced. They could be a list of suggestions or opinions put forward to address the problem.
SOLUTION SEVEN

6 C’s (Concise, Clear, Courteous, Correct, Complete, Concrete)

(i) **Concise** – information presented must be brief and to the point specifying what one is talking about.

(ii) **Clear** - The message must be understandable by the parties. This may mean the use of graphical information to enhance their understanding in some Cases (The main purpose of the message should be understood)

(iii) **Courteous** - refers to taking into account the feelings of the receiver of the messages. e.g. To tell them that you do not understand why they are failing to understand a simple concept may imply that you mean they are dull. This could hurt their feelings and consequently lose interest in the interaction process. Courtesy is attached to emotions i.e. if one is angry or frightened, chances are that the communication would be affected. Hence negative emotions should be avoided to achieve effective communication.

(iv) **Correct** - refers to telling the truth. To be relied upon by the audience or recipient.

(v) **Complete** - refers to all the facts the reader or listener needs. The message should answer all the questions of how, when, where, why, what, and who.

(vi) **Concrete** - implies being particular and clear rather than fuzzy and general. Concrete message is supported with specific facts and figures. A concrete message is not misinterpreted.

(b) **KISS Model**

Keep it Short and Simple - this requires the communicator to keep his message within reasonable length determined by necessity of detail presented. A message that is too complicated to comprehend will be resented by audience. To avoid this one must adopt a language that is ordinary, common, and familiar to the audience.

(c) **PASS MODEL (Purpose, Audience, Structure, Style)**

For communication to be successful and effective these must considered seriously.

(i) **Purpose** – what is communication meant to achieve i.e. to inform, advice, request, sooth, hurt etc. Sender must be clear of the purpose to be relevant.

(ii) **Audience** - various methods of analysing the target audience of the communication must be applied to determine the intended audience. The audience could be internal or external. They could also be classified by age, size, sex, personal, corporate etc.
(iii) Structure – a suitable form or design must be adopted to most effectively and efficiently deliver message. This is in line with the level, purpose and audience of the communication. Structure involves the volume of information to be communicated and how that information is arranged. It must be logically arranged.

(iv) Style – language employed will vary from situation to situation and from individual to individual. In this case style refers to the use of language.

END OF SOLUTIONS
DIPLOMA IN ACCOUNTANCY PROGRAMME EXAMINATIONS

LEVEL ONE

DA 5: COST ACCOUNTING

TUESDAY 12 JUNE 2018

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   
   Section A: One (1) Compulsory question.
   Section B: Five (5) Optional Questions. Attempt any Four (4) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. Cell Phones are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A

Attempt ALL ten (10) multiple choice questions in this section.

QUESTION ONE

Each of the following questions has only ONE correct answer. Write the LETTER of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1 If the minimum stock level and average stock level of raw material “A” are 4,000 and 9,000 units respectively, calculate the reorder quantity.

A. 8,000 units  
B. 11,000 units  
C. 10,000 units  
D. 9,000 units  

(2 marks)

1.2 An organisation manufactures a single product. The total cost of making 4,000 units is K20,000 and the total cost of making 20,000 units is K40,000. Within this range of activity the total fixed costs remain unchanged. What is the variable cost per unit of the product?

A. K0.80  
B. K1.20  
C. K1.25  
D. K2.00  

(2 marks)

1.3 Which of the following are included in the cost of holding inventory?

(i) The cost of insurance  
(ii) Rental payments on storage space  
(iii) The cost of placing an order

A. (i) and (ii)  
B. (i) and (iii)  
C. (ii) and (iii)  
D. (i), (ii) and (iii)  

(2 marks)
1.4 A factory in Lusaka Matero Compound consists of two production cost centres (P and Q) and two service cost centres (X and Y). The total allocated and apportioned overhead for each is as follows:

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>Q</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>K95,000</td>
<td>K82,000</td>
<td>K46,000</td>
<td>K30,000</td>
</tr>
</tbody>
</table>

It has been estimated that each service cost centre does work for the other cost centres in the following proportions:

- Percentage of service cost centre X to P: 40%  
- Percentage of service cost centre X to Q: 40%  
- Percentage of service cost centre X to Y: 20%  
- Percentage of service cost centre Y to P: 30%  
- Percentage of service cost centre Y to Q: 60%  
- Percentage of service cost centre Y to X: 10%  

After the reapportionment of service cost centre costs has been carried out using a method that fully recognises the reciprocal service arrangements in the factory, what is the total overhead for production cost centre P?

A. K122,400  
B. K124,716  
C. K126,000  
D. K127,000  

(2 marks)

1.5 A small mining firm in Chingola absorbs overheads on labour hours. In one period 16,100 hours were budgeted and 11,500 hours were worked. The actual overheads were K138,000 and there was K23,000 over-absorption.

The overhead absorption rate per hour was:

A. K8.57  
B. K10.00  
C. K13.00  
D. K14.00  

(2 marks)
1.6 Which one of the following statements is incorrect?

A. Job costs are collected separately, whereas process costs are averages.
B. In job costing the progress of a job can be ascertained from the materials requisition notes and job tickets or time sheet.
C. In process costing information is needed about work passing through a process and work remaining in each process.
D. In process costing, but not job costing, the cost of normal loss will be incorporated into normal product costs.

(2 marks)

1.7 In process costing, if an abnormal loss arises the process account is generally:

A. Debited with the scrap value of the abnormal loss units
B. Debited with the full production cost of the abnormal loss units
C. Credited with the scrap value of the abnormal loss units
D. Credited with the full production cost of the abnormal loss units.

(2 marks)

1.8 Which of the following are features of service organisations?

(i) High levels of inventory
(ii) High proportion of fixed costs
(iii) Difficulty in identifying suitable cost units
(iv) Tangibility of output

A. (i) and (ii) only
B. (i) and (iii) only
C. (ii) and (iii) only
D. (ii) and (iv) only

(2 marks)

1.9 Under absorption costing principles a favourable sales volume variance is calculated as the difference in sales volumes multiplied by:

A. Standard contribution per unit
B. Standard cost per unit
C. Standard profit per unit
D. Standard selling price per unit

(2 marks)
1.10 When opening inventory was 8,500 litres and closing inventory was 6,750 litres, a firm had a profit of K62,100 using marginal costing. Assuming that a total of 16,500 litres were sold and the production fixed overheads amounted to K44,250, what would be the profit using absorption costing?

A. K56,850  
B. K57,865  
C. K66,335  
D. K67,350

(2 marks)

[Total: 20 Marks]
SECTION B

Attempt any **FOUR** (4) questions in this section.

**QUESTION TWO**

A company within the chemical industry located along Mukwa road in Lusaka mixes powdered ingredients in two different processes to produce ladies lotion known as “Muzungu-Bulaki”. The output of Process 1 becomes the input of Process 2 and the output of Process 2 is transferred to the packing department as finished product. The company uses the weighted average method of inventory valuation.

Output from process 1 is 9,200 kgs at a valuation of K2 per kg in the process account at that stage. Information regarding process 2 as extracted from the engineer’s preliminary report is set out as follows:-

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
<th>Rate per kilogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material C</td>
<td>6,600 kilograms</td>
<td>K2.50 per kilogram</td>
</tr>
<tr>
<td>Material D</td>
<td>4,200 kilograms</td>
<td>K1.50 per kilogram</td>
</tr>
<tr>
<td>Flavouring Essence</td>
<td></td>
<td>K600</td>
</tr>
<tr>
<td>Mixing Labour</td>
<td>370 hours</td>
<td>K4 per hour</td>
</tr>
<tr>
<td>Overhead Costs</td>
<td></td>
<td>K2,960</td>
</tr>
<tr>
<td>Normal Waste</td>
<td></td>
<td>5% of weight input with no disposal value</td>
</tr>
<tr>
<td>Output</td>
<td>18,000 kilograms</td>
<td></td>
</tr>
</tbody>
</table>

No work in process at the beginning of the week but 1,000 kilograms in process at the end of the week and estimated to be only 50% complete so far as labour and overhead were concerned. Overhead of K6,400 incurred by the two processes to be absorbed on the basis of mixing labour hours.

**Required**

a) Prepare a schedule of the equivalent units for Process 2  
   (8 marks)

b) Calculate the full cost per unit that would be used to value output in Process 2 (4 marks)

c) Prepare the Process 2 account  
   (8 marks)

[Total: 20 Marks]
QUESTION THREE

(a) Explain ‘Cost centre’ and ‘Cost unit’. (4 marks)

(b) A company manufactures a product from a raw material, which is purchased at K54 per kg. The company incurs a handling cost of K350 plus freight of K400 per order. The incremental carrying cost of inventory of raw material is K0.50 per kg per month. In addition, the cost of working capital finance on the investment in inventory of raw material is K8 per kg per annum. The annual production of the product is 94,500 units and 2 units are obtained from one kg of raw material.

Required:

(i) Calculate the economic order quantity of raw materials. (6 marks)
(ii) Calculate the frequency of placing orders for procurement. (2 marks)

(c) Kapiri Manufacturing Company has three factories located in Ndola, Kabwe and Lusaka. The company makes ‘parts’ for equipment and machinery used in the agricultural industry. Details of the labour payment methods in the Ndola factory as well as two employees work are as follows:

(1) Direct labour force is paid on a time rate basis, but a bonus is paid if work can be completed faster than the time allowed.
(2) The bonus is for the savings achieved to be shared equally between employer and employee.
(3) Wages are paid as (time rate + 50% of (time saved x time rate)).
(4) If no bonus is due, then the time rate applies.
(5) Chomba Zulu worked a 38 hour work last week; his time rate is K10 per hour. He is allowed a time of 30 minutes to carry out his work on each unit of production; last week he completed 71 units.
(6) Sara Mutale has a time rate of K11 per hour; last week she worked 40 hours. She is allowed a time of 15 minutes to carry out her work on each unit of production; last week she completed 184 units.

Required

Determine the gross earnings of each employee. (8 marks)

[Total: 20 Marks]
QUESTION FOUR

Buya Limited makes football boots. In May 2018 the budgeted sales and production were 19,000 boots and the standard cost card is as follows:

<table>
<thead>
<tr>
<th>K/unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials</strong></td>
<td>10</td>
</tr>
<tr>
<td>(2kg at K5/kg)</td>
<td></td>
</tr>
<tr>
<td><strong>Labour</strong></td>
<td>36</td>
</tr>
<tr>
<td>(3hrs at K12/hr)</td>
<td></td>
</tr>
<tr>
<td><strong>Overheads</strong></td>
<td>3</td>
</tr>
<tr>
<td>(3hrs at K1/hr)</td>
<td></td>
</tr>
</tbody>
</table>

Total fixed costs in the period were budgeted at K100,000 and were absorbed on the basis of labour hours worked.

In May 2018 the following results were achieved.

40,000kg of material (Leather) was bought at a cost of K196,000, this produced 19,200 football boots. No inventory of raw materials is held. The labour was paid for 62,000 hours and the total cost was K694,000. Labour worked for 61,500 hours.

Variable overheads in the period were K67,000.

The sales price was reduced to protect the sales levels. However, only 18,000 football bats were sold at an average price of K65.

Total fixed costs in May were K107,000.

**Required:**

Calculate the following variances:

(a) Material price and usage (4 marks)
(b) Labour rate, idle time and efficiency (4 marks)
© Variable overhead expenditure and efficiency (4 marks)
(d) Fixed overhead expenditure and volume (4 marks)
(e) Sales price and volume profit (4 marks)

[Total: 20 Marks]
QUESTION FIVE

Kalusale Mining Corporation (KMC), is a medium sized mining firm situated in Northern-Western province of Zambia. KMC is owned by graduates of the Copperbelt University who after working for Mafukeni Copper Mines (MCP) and Chililabombwe Copper Mines (CCM) in the Copperbelt, decided to set out in business in Solwezi district. KMC exports three (3) versions of copper products namely Anodes, Cathodes and Blisters to foreign markets both in Africa and Europe.

The following data relates to a typical production cycle of KMC:

1. The selling price per unit of Copper Cathodes is K60.
2. Variable production cost is K35 per unit and fixed production costs of K30,000 per period are recovered on the basis of the normal capacity of 5,000 units per period.
3. Fixed administration, selling and distribution overheads are K19,000 per period.
4. There was no opening inventory for the latest period

**Required:**
Calculate the profit reported for sales of 5,000 units last period for production volumes of 5,000 units, 6,000 units and 7,000 units, using:

(a) Absorption Costing  
(b) Marginal Costing  
(c) State Four (4) the advantages of marginal Costing  
(d) Outline Four (4) limitations of absorption costing  

[Total: 20 Marks]

QUESTION SIX

Having acquired funding from the Ministry of Youth and Child Development under the Youth Empowerment Fund in June 2016, Chipulukusu Technology located in Ndola District produces only two products: a major computer part and cell phones. The company uses an absorption costing system and overhead costs are currently allocated using a plant-wide overhead rate based on direct labour hours. Outside cost consultants have recommended, however, that the company use activity-based costing to charge overhead to products.

The company expects to produce 4,000 computer parts and 2,000 cell phones in 2018. Each computer part requires two (2) direct labour hours to produce and each cell phone requires half (0.5) an hour to produce.

The direct material and direct labour costs included in the two products are as follows:
### Item Direct Material per unit Direct Labour per unit

<table>
<thead>
<tr>
<th>Item</th>
<th>Computer Parts</th>
<th>Cell Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(K)</td>
<td>(K)</td>
</tr>
<tr>
<td>Direct Material per unit</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>Direct Labour per unit</td>
<td>16</td>
<td>4</td>
</tr>
</tbody>
</table>

**Budgeted (Estimated) Total Production Overhead Data For 2018:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budgeted Overhead (K)</th>
<th>Budgeted Volume levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Set-ups</td>
<td>80,000</td>
<td>20 Set-ups</td>
</tr>
<tr>
<td>Material Handling</td>
<td>70,000</td>
<td>5,000 Kgs</td>
</tr>
<tr>
<td>Packaging &amp; Transportation</td>
<td>120,000</td>
<td>6,000 boxes</td>
</tr>
<tr>
<td><strong>Total Overheads</strong></td>
<td><strong>270,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

Based on an analysis of the three overhead activities, it was estimated that the two products would require these activities as follows in 2018:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Computer Parts</th>
<th>Cell Phone</th>
<th>Overall Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Set-ups</td>
<td>5 Set-ups</td>
<td>15 Set-ups</td>
<td>20 Set-ups</td>
</tr>
<tr>
<td>Material Handling</td>
<td>1,000 kgs</td>
<td>4,000 kgs</td>
<td>5,000 kgs</td>
</tr>
<tr>
<td>Packaging &amp; Transportation</td>
<td>4,000 boxes</td>
<td>2,000 boxes</td>
<td>6,000 boxes</td>
</tr>
</tbody>
</table>

**Required:**

(a) Calculate the cost of each product using a plant-wide rate based on direct labour hours.  
(7 marks)

(b) Calculate the activity cost rates for setups, material handling and packaging and shipping.  
(3 marks)

(c) Calculate the cost per unit of the two products using an activity-based costing system.  
(10 marks)

[Total: 20 Marks]
DA 5 – COST ACCOUNTING SOLUTIONS

SOLUTION ONE

1.1 C
Average stock level = Minimum stock level + ½ Reorder quantity
9,000 units = 4,000 units + ½ Reorder quantity
½ Reorder quantity = 9,000 units – 4,000 units
Reorder level = 5, 000 units / 0.5 = 10,000 units

1.2 C

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Costs (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>20,000</td>
<td>40,000</td>
</tr>
<tr>
<td>Low</td>
<td>4,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Difference</td>
<td>16,000</td>
<td>20,000</td>
</tr>
</tbody>
</table>

Variable cost per unit = K20,000/16,000 units
= K1.25 per unit.

1.3 A

1.4 D
use the repeated distribution method as follows;

<table>
<thead>
<tr>
<th>P</th>
<th>Q</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>95,000</td>
<td>82,000</td>
<td>46,000</td>
<td>30,000</td>
</tr>
</tbody>
</table>

Reapportion X
18,400
18,400
(46,000)
9,200

Reapportion Y
11,760
23,520
3,920
(39,200)

Reapportion X
1,568
1,568
(3,920)
784

Reapportion Y
235
470
78
(784)

Reapportion X
31
31
(78)
16

Reapportion Y
5
9
2
(16)

Rounding
1
1

K127,000

K127,000

1.5 D

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual overhead</td>
<td>138,000</td>
</tr>
<tr>
<td>Over-absorbed overhead</td>
<td>23,000</td>
</tr>
<tr>
<td>Therefore amount of overhead absorbed</td>
<td>161,000</td>
</tr>
</tbody>
</table>

Hours worked = 11,500.
Therefore absorption rate per hour = K161,000/11,500 hours = K14/hour.
As inventory decreases over the period, the cost of sales will be higher with absorption costing, since they will include fixed overhead in the opening inventory now sold. The extra cost of sales (and thus reduction in profit) = \((8,500 - 6,750) \times K3 = K5,250\). This means that since profit will be lower with absorption costing by K5,250, the absorption costing profit will be K\((62,100 - 5,250) = K56,850\).

**SOLUTION TWO**

**Step 1: Determine output and losses**

<table>
<thead>
<tr>
<th>Kgs</th>
<th>20,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (9,200 + 6,600 + 4,200)</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>Normal Waste (20,000 x 10%)</td>
<td>1,000</td>
</tr>
<tr>
<td>Abnormal loss/gain</td>
<td>-</td>
</tr>
<tr>
<td>Work-in progress</td>
<td>1,000</td>
</tr>
<tr>
<td>Output</td>
<td>18,000</td>
</tr>
</tbody>
</table>

**Statement of Equivalent Units**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Material</th>
<th>Labour</th>
<th>Overheads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal waste</td>
<td>1,000</td>
<td>-</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>WIP</td>
<td>1,000</td>
<td>1,000</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Fully Worked Units</td>
<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
</tr>
<tr>
<td></td>
<td>20,000</td>
<td>19,000</td>
<td>18,500</td>
<td>18,500</td>
</tr>
</tbody>
</table>

**Step 2: Calculate cost per unit of output, losses and WIP**

<table>
<thead>
<tr>
<th></th>
<th>Material</th>
<th>Labour</th>
<th>Overheads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs (K),(W)</td>
<td>41,800</td>
<td>1,480</td>
<td>2,960</td>
</tr>
<tr>
<td>Equivalent units</td>
<td>19,000</td>
<td>18,500</td>
<td>18,500</td>
</tr>
<tr>
<td>Cost per equivalent unit (K)</td>
<td>2.2</td>
<td>0.08</td>
<td>0.16</td>
</tr>
</tbody>
</table>

**Total**  
\(K2.44\) per kg
Step 3: Calculate total cost of output, losses and WIP

Step 4: Complete Accounts

<table>
<thead>
<tr>
<th>Description</th>
<th>Kgs</th>
<th>K</th>
<th>Description</th>
<th>Kgs</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 1 Material</td>
<td>9,200</td>
<td>18,400</td>
<td>Normal Waste</td>
<td>1,000</td>
<td>-</td>
</tr>
<tr>
<td>Material C</td>
<td>6,600</td>
<td>16,500</td>
<td>Work-In-Progress</td>
<td>1,000</td>
<td>2,320</td>
</tr>
<tr>
<td>Material D</td>
<td>4,200</td>
<td>6,300</td>
<td>Finished Goods</td>
<td>18,000</td>
<td>43,920</td>
</tr>
<tr>
<td>Flavouring Essence</td>
<td>600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixing Labour</td>
<td>1,480</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overhead</td>
<td>2,960</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20,000</td>
<td>46,240</td>
<td></td>
<td>20,000</td>
<td>46,240</td>
</tr>
</tbody>
</table>

SOLUTION THREE

(a) Explanation of ‘Cost Centre’ and ‘Cost Unit’

CIMA defines Cost Centre as “a production or service, function, activity or item of equipment whose costs may be attributed to cost units. A cost centre is the smallest organisational sub-unit for which separate cost allocation is attempted”. A cost centre is an individual activity or group of similar activities for which costs are accumulated. For example in production departments, a machine or group of machines within a department or a work group is considered as cost centre. Any part of an enterprise to which costs can be charged is called as ‘cost centre’.

A cost centre can be:

(i) Geographical i.e. an area such as production department, stores, sales area.
(ii) An item of equipment e.g. a lathe, forklift, truck or delivery vehicle.
(iii) A person e.g. a sales person.
CIMA defines Cost Unit as “a quantitative unit of product or service in relation to which costs are ascertained”. A ‘cost unit’ is a unit of product or unit of service to which costs are ascertained by means of allocation, apportionment and absorption. It is a unit of quantity of product, service or time or a combination of these in relation to which costs are expressed or ascertained. For example, specific job, contract, unit of product like fabrication job, road construction contract, an automobile truck, a table, 1000 bricks etc. The cost units which pass through the cost centre, the direct and indirect costs of the cost centre are charged to the units of production by means of an absorption rate. The unit of output in relation to which cost incurred by a cost centre is expressed is called ‘cost unit’. Cost units can be developed for all kinds of organizations, whether manufacturing, commercial or public utility services.

(b) Calculation of Economic Order Quantity & Frequency of Ordering.

(i) Economic Order Quantity

\[
EOQ = \sqrt{\frac{2CD}{H}}
\]

Where

- \(C\) is the Cost of placing an order
- \(D\) is the annual demand
- \(H\) is the annual holding costs.

Thus \(C\) = Handling Cost + Freight

\[
= K350 + K400
= K750
\]

\(D\) = (Annual Production/Daily Usage) x 1 Kg

\[
= (94,500 \text{ units}/2 \text{ units})
= 47,250 \times 1 \text{ kg}
= 47,250 \text{ kgs}
\]

\(H\) = Carrying Cost + Finance charge on investment in inventory

\[
= (12 \text{ months} \times K0.50) + K8
= K14
\]

\[\therefore EOQ = \sqrt{\frac{2 \times K750 \times 47,250 \text{ kgs}}{K14}}\]

\[= 2,250 \text{ kgs}\]
(ii) Frequency of ordering = Annual Demand/EOQ
= 47,250 kgs/2,250 kgs
= 21 Times

(c) Kapiri Manufacturing Company

Determination of gross wages for each employee

**Chomba Zulu**

- Basic Pay (38 hours x K10 per hour) 380 K
- Bonus:
  - Time allowed (71 units x 30/60 hrs) 35.5 hrs
  - Actual Time 38 hrs
  - Time Saved -
- No Bonus paid since no time is saved 0
- Gross Earnings 380 K

**Sara Mutale**

- Basic pay (40hrs x K11) 440 K
- Bonus:
  - Time Allowed (184 units x 15/60 hrs) 46 hrs
  - Actual Time saved 40 hrs
  - Time saved 6 hrs
  - Bonus @ 50% 3 hrs
  - Bonus payment x K11 33 K
- Gross Earnings 473 K
SOLUTION FOUR

Calculation of Variances

1. **Material Price Variance**
   
   40,000 kgs used should have cost x K5) 200,000
   
   But did cost 196,000
   
   Materials Price Variance 4,000 (F)

2. **Material Usage Variance**
   
   19,200 Units should have used x 2kgs 38,400 Kgs
   
   But did use 40,000 Kgs
   
   Materials Usage Variance in Kgs 1,600 Kgs (A)
   
   Valued at Standard Cost of materials per Kg x K5 per kg
   
   Materials Usage Variance Adverse 8,000 (A)

3. **Labour Rate Variance**
   
   62,000 hours paid should have cost x K12) 744,000
   
   But did cost 694,000
   
   Labour Rate Variance 50,000 (F)

4. **Labour Efficiency Variance**
   
   19,200 Units should have taken x 3 hours 57,600 hours
   
   But did use (Hrs actually worked) 61,500 hours
   
   Labour Efficiency Variance in hours 3,900 hours (A)
   
   Valued at Standard Cost of Labour x K12 per hour
   
   Labour Efficiency Variance 46,800 (A)

5. **Labour Idle Time Variance**
   
   Number of hours Paid 62,000 hours
   
   Number of hours worked 61,500 hours
   
   Idle Time in hours 500 hours (A)
   
   Valued at Standard Cost of Labour x K12 per hour
   
   Idle Time Variance 6,000 (A)
6. **Variable Overhead Expenditure Variance**

61,500 hours of operations should have cost x K1

But did cost

Variable Overhead Expenditure Variance **5,500** (A)

7. **Variable Overhead Efficiency Variance**

19,200 Units should have taken x 3 hours

But did use (Hrs actually worked)

Variable O/head Efficiency Variance in hours 3,900 hours (A)

Valued at Standard Cost of Labour x K1 per hour

Labour Efficiency Variance **K3,900** (A)

8. **Fixed Overhead Expenditure Variance**

Budgeted Fixed Overhead 100,000

Actual Fixed Overhead 107,000

Fixed Overhead Expenditure Variance **7,000** (A)

9. **Fixed Overhead Volume Variance**

Budgeted Production 19,000 Units

Actual Production 19,200 Units

Fixed Overhead Volume Variance in Units 200 Units (F)

Valued at OAR per unit **(W)** x K5.25/unit

Fixed Overhead Volume Variance **K1,050** (F)

**Working**

Budgeted Production (Units) 19,000

Budgeted Labour Hours (19,000 x 3) 57,000

Budgeted Fixed Overheads K100,000

Absorption Rate per hour (100,000 / 57,000) K1.75

Absorption Rate per unit (K1.75 x 3Hrs) K5.25
SOLUTION FIVE

(a) Profit Statement Using Absorption Costing

<table>
<thead>
<tr>
<th>Units</th>
<th>5,000 units</th>
<th>6,000 units</th>
<th>7,000 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales @K60</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Production Costs @K41</td>
<td>205</td>
<td>246</td>
<td>287</td>
</tr>
<tr>
<td>Less Closing Inventory</td>
<td>-</td>
<td>(41)</td>
<td>(82)</td>
</tr>
<tr>
<td>Less over-absorbed overheads</td>
<td>-</td>
<td>(6)</td>
<td>(12)</td>
</tr>
<tr>
<td>Total Production Cost of Sales</td>
<td>205</td>
<td>199</td>
<td>193</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>95</td>
<td>101</td>
<td>107</td>
</tr>
<tr>
<td>Less Administration Costs</td>
<td>(19)</td>
<td>(19)</td>
<td>(19)</td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td><strong>76</strong></td>
<td><strong>82</strong></td>
<td><strong>88</strong></td>
</tr>
</tbody>
</table>

(b) Profit Statement Using Marginal Costing

<table>
<thead>
<tr>
<th>Units</th>
<th>5,000 units</th>
<th>6,000 units</th>
<th>7,000 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales @K60</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Variable Costs @K41</td>
<td>175</td>
<td>210</td>
<td>245</td>
</tr>
<tr>
<td>Less Closing Inventory</td>
<td>-</td>
<td>(35)</td>
<td>(70)</td>
</tr>
<tr>
<td>Contribution</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td><strong>Less:-</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Production Costs</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Administration Costs</td>
<td>19</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td><strong>76</strong></td>
<td><strong>76</strong></td>
<td><strong>76</strong></td>
</tr>
</tbody>
</table>

(c) Four (4) Advantages of Marginal Costing

1. Simple to operate  
2. No apportionment of fixed costs  
3. Size of contribution provides management with useful information about profits  
4. It is a great aid to decision making  
5. Under/over absorption of overheads is avoided
(d) Four (4) Limitations of Absorption Costing

1. It is ‘fair’ to share fixed production costs between units of production as such costs are incurred in order to make output.
2. Closing inventories valued in accordance with 1AS 2 principles.
3. It is easier to determine the profitability of several products by charging a share of fixed overheads to them.
4. Where building up inventory is necessary fixed costs should be included in inventory valuations in order to present a series of losses from occurring.

SOLUTION SIX

(a) Calculation of each products cost using Absorption Costing

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Computer Parts</th>
<th>Cell Phones</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Material</td>
<td>K 30</td>
<td>K 17</td>
</tr>
<tr>
<td>Direct Labour</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Production Overhead (W)</td>
<td>60</td>
<td>15</td>
</tr>
<tr>
<td>Total Unit Cost</td>
<td><strong>106</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

Working

Budgeted Overheads amounted to K270,000

Budgeted Labour Hours 4,000 computer parts x 2hrs + 2,000 cell phones x 0.5hrs equals to 9,000 direct labour hours

Overhead Absorption Rate = Budgeted Overheads/9,000 labour hours
= K30 per direct labour hour

Production Overheads

Computer Parts = K60 (2 direct labour hours x 30)
Cell phones = K15 (0.5 direct labour hours x 30)

(b) Activity Cost Rates

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budgeted Overheads (K)</th>
<th>Estimated Volume (Levels)</th>
<th>Activity Cost Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Set-up</td>
<td>80,000</td>
<td>20 set-ups</td>
<td>K4,000 per set-up</td>
</tr>
<tr>
<td>Material Handling</td>
<td>70,000</td>
<td>5,000 kgs</td>
<td>K14 per kg</td>
</tr>
<tr>
<td>Packaging &amp; Transportation</td>
<td>120,000</td>
<td>6,000 boxes</td>
<td>K20 per box</td>
</tr>
</tbody>
</table>
(c) Cost of the products using ABC

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>4,000 Computer Parts</th>
<th>2,000 Cell Phones</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K</td>
<td>K</td>
</tr>
<tr>
<td>Direct Material</td>
<td>120,000</td>
<td>34,000</td>
</tr>
<tr>
<td>Direct Labour</td>
<td>64,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Production Overheads:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Production Set-Ups:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 set-ups @K4,000 per set-up</td>
<td>64,000</td>
<td>8,000</td>
</tr>
<tr>
<td>15 set-ups @K4,000 per set-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Material Handling:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,000 kgs@K14 per kg</td>
<td>14,000</td>
<td>56,000</td>
</tr>
<tr>
<td>4,000 kgs@K14 per kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Packaging &amp; Transport:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4,000 boxes@K20 per box</td>
<td>80,000</td>
<td>40,000</td>
</tr>
<tr>
<td>2,000 boxes@K20 per box</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Production Cost</strong></td>
<td>298,000</td>
<td>198,000</td>
</tr>
<tr>
<td><strong>Total Production</strong></td>
<td>4,000 units</td>
<td>2,000 units</td>
</tr>
<tr>
<td><strong>Total Cost per Unit</strong></td>
<td><strong>K74.50 per part</strong></td>
<td><strong>K99 per phone</strong></td>
</tr>
</tbody>
</table>

END OF SOLUTIONS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   - Section A: One (1) Compulsory scenario question.
   - Section B: Five (5) Optional Questions. Attempt any four (4) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
Section A – (COMPULSORY)

Attempt all ten (10) multiple choice questions

QUESTION ONE

1.1 Loveness rented a one roomed apartment in Kalingalinga Compound from Bull Kasonkomona a street vendor. She explained to him that she intended to use the room to sell sex during the day when he was at work. Bull demand an advance payment of six months, but she paid for three months, promising to pay the balance later. She never paid the balance because business was bad. Bull sued Loveness for the arrears in the Court, but the court declined to attend to the dispute. The most likely reason for the court’s attitude is that

A. The agreement was unenforceable in absence of the subject matter.
B. The agreement was not valid between the parties.
C. The agreement was illegal as it was contrary to public policy.
D. The agreement was void for mistake.  

(2 marks)

1.2. Why is it important to know when property in the goods under the contract of sale passes from the seller to the buyer?

A. To establish when the contract is made.
B. To determine who should bear the risk of loss or damage to the goods.
C. To identify the party in possession of the goods at the time of sale.
D. To classify the type of goods being sold.  

(2 marks)

1.3. The correct distinction between self-employed persons and employees is that

A. Employees are strictly liable while self-employed persons are not.
B. A self-employed person is an integral part of the business while an employee is not.
C. The self-employed person is vicariously liable while an employee is not.
D. An employee works under a contract for services while a self-employed person works under a contract of services.  

(2 marks)

1.4. The Chief Justice is an ex-officio of the High Court. This means that

A. He is one of the judges who presides over the cases in the High Court.
B. He is the only judge to preside over High Court cases.
C. While he is expressly appointed, his eligibility is debatable.
D. He qualifies by virtue of his position in the judiciary.  

(2 marks)
1.5. The main rule that governs an offer which was established in *Carlill v Carbolic Smokeball & Co. Ltd, 1893* was that:

A. An offer must be clear and if it is ambiguous, then it is not valid.
B. In English law, it was impossible to make an offer to the world at large.
C. Acceptance in reward cases is communicated by doing the required act.
D. An offer can be made to one person, a group or the public at large.

(2 marks)

1.6. Answer this question from the facts given below:

Goodwill Mwanza made an offer to supply coal to the Zambia Mining Corporation. He indicated to the company that the *acceptance* should be on the form-GM 1 supplied with the offer. The Company replied in writing on a different paper. Mwanza cancelled the offer for breach of rules which govern acceptance. Which particular rule regarding communication of *acceptance* do you think was breached by the company?

A. That acceptance as a general rule must be communicated.
B. That a unilateral offer acceptance is communicated by the conduct of the offeree.
C. That if offeror specifies method of communicating acceptance, doing otherwise is a breach.
D. That acceptance may be communicated by silence.

(2 marks)

1.7 Johnny Kalimba sent Gregory Phiri to the well at 08.00 hours for water to bath, before attending the 10 hours church service. He paid him in advance 10 kwacha for his trouble. Gregory found a long queue of people at the well and delayed – he came back at 12 hours. As a result, Kalimba missed the 10 hours church service and demanded a refund from Gregory. Gregory refused to refund him arguing that a ‘labourer is worth his wage’. The contract between the two parties can best be described as

A. Performed
B. Breached
C. Frustrated
D. Discharged

(2 marks)

1.8 The ‘Neighbour’ principle established in *Donoghue v Stevenson, 1932*, can be understood to mean

A. The Duty of care
B. The Breach of the duty of care
C. Physical proximity
D. Reasonable foresight

(2 marks)
1.9 According to the Law Reform (Frustrated Contracts) Act, Chapter 73 of the laws of Zambia which deals with the effects of frustration of a contract, fairness prevails when:

A. The loss resulting from frustration of the contract lies where it falls.
B. Any money pending before frustration ceases to be payable.
C. Either of the parties who accrues a valuable benefit pays for it.
D. Any money deposited before frustrations be recoverable. (2 marks)

1.10 The Romalpa Clause which emanated from the case Aluminium Industrial Vaasen BV v Romalpa Aluminium Limited, 1976, performs the following role:

A. The retention of title by the buyer.
B. The retention of title by the seller.
C. The intention of parties in passing title.
D. The disposition of a buyer in possession. (2 marks)  

[Total 20 Marks]
SECTION B
There are FIVE (5) questions in this section. Attempt any four (4) questions.

QUESTION TWO
Chipange Banda, an accountant, agreed with Sidney, that Sidney would redecorate Chipange's business premises for K2,000. The written contract provided that all woodwork would be properly prepared for painting prior to the application of paint and no paint containing lead would be used. Sidney completed the work, but he used paint containing lead in one of Chipange's offices. Chipange suffered an allergic reaction due to the lead paint and could not work for a long period, during which he lost K30,000 in income. Chipange knew of her allergy to lead, and that was the reason he had specified that paint containing lead should not be used. However, he failed to mention this reason to Sidney. Chipange also discovered that in three of his offices the woodwork was not prepared for painting before paint was applied. He now seeks your advice.

Required:

Advise Chipange as to whether he can:

(a) Recover damages for breach of contract in respect of her loss of earnings.  

(10 marks)

(b) Obtain an order for specific performance to compel Sidney to prepare and repaint the woodwork as agreed in the contract.  

(5 marks)

(c) Why is it important to determine the exact time in which property in the goods passes to the purchaser.  

(5 marks)

[Total 20 Marks]

QUESTION THREE

(a) Kelvin Davies is a white man who stayed behind in Zambia while the rest of his family relocated to New Zealand. As he advanced in age, he sold all his properties and banked the proceeds in his name. He retained one truck which he used to supply river and building sand to several customers around Lusaka. This way, he was able to meet his daily needs. He rented a room in Zani-Muone Hotel, and employed Speed Zulu as his driver. Zulu performed most of the tasks on his behalf, such as depositing and withdrawing money from the bank. In fact most bank personnel assumed that Speed Zulu was the owner of the account, but this was not so as he only cashed cheques signed by Kelvin. Zulu was known among his friends as 'Mzungu' because of his association with Kelvin. The two were always seen leaving Zani Muone in the morning, and their return in the evening was a sign that the sun had set. The truck was always packed by the Hotel on weekends and public holidays.

One morning, Speed Zulu found that Kelvin had lapsed into a coma and was hospitalized at St. Monic Hospital. The doctors told him that it would take some time for Kelvin to
regain consciousness. He therefore continued to operate the truck, opened an account in his name, and into this account, he deposited and withdrew the money for the daily operations of the business. After sometime the truck developed mechanical faults and he sold it. He deposited the money into his bank account. When the family of Kelvin arrived from New Zealand, they were told that Zulu held all the assets belonging to Kelvin. They wanted all the assets which Kelvin had e-mailed to them, shortly before he went into the comma. But Zulu insists that they were partners, though no agreement with Kelvin was shown. Because they were partners, he carried on his responsibilities diligently even after the incapacity of Kelvin. He told the family of Kelvin that in view of their relationship, he was entitled to fifty percent of the assets.

Both parties need your advice. Explain to them whether this was a partnership or some other business association, and whether Speed Zulu had done anything unlawful.

(12 marks)

(b) Johnson Bully of Nkana Red Devils was given a red card during a match deadlocked at 0 - 0 with Mighty Mufulira Wanderers barely five minutes before the end of the game. He had accidentally broken the leg of Jogo of Mufulira Wanderers. Mufulira scored the winning goal in the 89th minute. The management of Nkana blamed their loss on the indiscipline of Bully, and he was handled the dismissal letter in the dressing room shortly after the end of the game. Bully has approached you seeking legal advice because he feels that he was not treated fairly. Advise him on any wrongs that may have been committed against him and any options that he may take to redress the situation.

(8 marks)

[Total: 20 Marks]

QUESTION FOUR

Mulenga's car broke down on his way from Kapiri Mposhi to Mpika. He phoned Dan, a mechanic he knew in Serenje to come to his rescue. When Dan arrived in Mkushi where the car was, Mulenga ordered him to hurry up and fix the car as he was late for the meeting. Dan got annoyed and told him that he was not his slave. An argument ensued as the two tried to establish who was the boss. Finally Mulenga refused to pay Dan since Dan insisted that in these matters, he was the boss.

You have been listening to this conversation and wish to advise the parties using your knowledge of employment law.

Required:
(a) Identify the nature of the agreement which has brought these two to clash. (10 marks)
(b) Explain the two tests that you can apply to establish the nature of this agreement? (10 marks)

[Total: 20 Marks]
QUESTION FIVE

(a) Complete the table below by showing the effect of the stated vitiating factor on the contract. The first question has been done for you.

<table>
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(b) Big Boy Gazola was the youngest son of Jimmy Koikoi of the Katanga Province. Gazo came into possession of travelers’ cheques that had already been cashed, deleted the signatures and sold them to the Village Bureau de Change, owned by Boer de Beers a wealthy white farmer. The cheques were not honoured and this caused a heavy loss to de Beers. He therefore threatened Gazo’s father that he would prosecute Gazo unless Jimmy mortgaged the piece of land lying idle by the stream in favour of the bank.

Using your knowledge of vitiating factors and some past judgment, explain if scaring someone may influence his ability to agree. What may the plaintiff prove show that he was prevented from exercising his free will?

(10 marks)

[Total: 20 Marks]

QUESTION SIX

Peter Tobias has been employed by “X Ray shoe makers” CC since 1987. He has a clean disciplinary record and is regarded as a reliable and trustworthy employee by the company. Because he is such a well-trusted employee, the company allows him to get away with minor misdemeanours which would not be tolerated by newer employees. For example – although the company has a strong policy on late-coming, Peter regularly clocks in 5 minutes late and has never been warned about this.

New employees are automatically given a warning whenever they clock in late. Peter Tobias unexpectedly becomes involved in Union activities and is eventually in 2007 elected as trade union representative. He takes his responsibilities as trade union representative very seriously and starts to become a bit of a nuisance to the company. On 21 March 2007, Peter clocked in 3 minutes late and was issued with a verbal warning. On 30 June he clocked in 2 minutes late, and received a written warning. On 3 October he clocked in 5 minutes late and was told he was dismissed. He also tells you that last month, he made a formal report to the Department of Labour about corruption and safety irregularities in the workplace.

You are the legal representative whom Peter consults to assist you in challenging the fairness of his dismissal.

Required:

(a) Explain, giving reasons, whether the dismissal was justified. (12 marks)

(b) Distinguish Summary dismissal from unlawful dismissal (8 marks)

[Total: 20 Marks]
SOLUTION ONE

1.1  C
1.2  B
1.3  B
1.4  D
1.5  D
1.6  C
1.7  C
1.8  D
1.9  C
1.10 B

SOLUTION TWO

a) Chipange may recover damages for breach of contract in respect of loss of earnings if it can be proved that the loss of K 30,000 naturally arose from the breach (measure of damages as established in Hadley v Baxendale). The breach of contract by Sidney resulted from not complying with the terms of the agreement, that is, using paint that contained lead against express instructions not to do so. The sickness which ensued incapacitated Chipange and he lost income. The loss of income was a direct result of the breach and therefore the argument that damage was remote from causation may not stand, notwithstanding that Chipange did not explain that he was allergic to lead. The amount Sidney is supposed pay is subject to different interpretations. Sidney may argue may pay K 2,000 as liquidated damages due to the breach as opposed to the economic loss of income of K30,000.

b) Sidney may obtain an order of specific performance from the court. But this equitable remedy is discretionary and will be denied or granted if Chipange is able to convince the court. It is through the court order that Sidney may be compelled to repaint the woodwork.

c) Time in a contract of sale is not important (a warrant) unless the parties refer to it as being of essence. And if they do, then time of payment or delivery is a condition and if it is breached, the contract is repudiated – meaning that the buyer may reject the goods if delivered late, or if the payment is delayed the seller may cancel the contract. It is important to determine when property in the goods passes from the seller to the buyer for two reasons:

a. To know who the owner is in case of loss or damage, because the one who bears loss is the owner
b. To be able to compel the buyer to pay for the goods.

Passing of property is therefore important because it spells out liability issues between the buyer and the seller.

**SOLUTION THREE**

(a)

- The relationship between Kelvin Davies and Speed Zulu is not a partnership, in absence of a Partnership Deed.
- The relationship is that of agency, created by an agreement that may be implied from the conduct of parties, since there is no written agreement. Kelvin has delegated his responsibilities to Zulu, and these include driving the truck, banking responsibilities and other roles.
- However when Kelvin is incapacitated, the agency of necessity arises: Zulu is unable to obtain instructions from his employer and some emergencies come his way. Whatever Zulu does hereafter is not unlawful as long as it is done for the benefit of the principal, including sale of the truck.
- As an agent he is not entitled to half of the property of the principal but is paid a commission, that is a percentage of the value of the business he may have executed, having regard to bank balances and other available assets.

(b) This is a dismissal for misconduct or poor execution of the contract. Bully is punished by the referee through a red card expulsion from the game, and cannot be punished twice for the same offence. Though the club is entitled to taking disciplinary action, the dismissal is harsh and unfair.

Under section 26 A of the employment Act, it is the rule of natural justice that before an employee can be dismissed on grounds of performance or conduct, he must be given an opportunity to be heard. Breach of this statutory provision entitles the employee to damages for wrongful dismissal.

Bully can therefore sue his employers for damages for wrongful dismissal.

Secondly the leg of Jogo is broken accidentally and it was not intentional. This cannot be interpreted as Gross misconduct for which an employee may be can be dismissed summarily.
SOLUTION FOUR

This is a contract for service in which Dan is the Boss. He knows how the mechanical work is done but Mulenga is ignorant, although he is the employer.

The test which may be applied to determine the nature of this contract are

- The control test-Dan is not controlled by Mulenga and is therefore not an employee. This is therefore a contract for services
- The integration test-Dan is skilled and not controlled by anyone in the execution of his duties. He is not an integral part of other business
- Multiple (Economic Reality) test- this test incorporates other determinants, of which Dan is not a beneficiary such as a salary, pension or leave benefits. He is therefore an independent contractor.

SOLUTION FIVE

a.

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b. The use of undue influence or duress prevents one from exercising his free will and an agreement obtained in this manner can be avoided or cancelled. For example in Williams v Bailey, 1866, a son forged his father's signature on promissory notes and cashed them at the bank. The bank lost a lot of money and threatened to prosecute the father unless he mortgaged a piece of land in favour of the bank. The father then agreed to make an equitable mortgage to the bank in consideration of the return of the promissory notes. The father succeeded in an action for cancellation of the agreement because it was procured by undue influence. It was held by Lord Westbury that the security given for the debt of the son by the father under such circumstances, was not the security of a man who acted with that freedom and power of deliberation that must be considered as necessary to validate a contract to give security for the debt of another.

SOLUTION SIX

(a) This matter is basically based on unfair dismissal. Unfair dismissal is when an employee is dismissed from their job in a harsh, unjust or unreasonable manner including political ground. In REDRILZA LIMITED v ABUID NKAZI AND OTHERS (S.C.Z. Judgment No. 7 of 2011) this was an appeal against the judgment of the Industrial Relations Court. In the complaint before the Industrial Relations Court, the respondents whose contracts of employment were terminated by notice claimed, amongst other things, their salary for
the unexpired term of their contracts. The Industrial Relations Court found in favor of the respondents, on the basis that the appellant invoked the termination clause in the respondent's contract of employment in bad faith, and consequently ordered that they be paid six months salary as damages. Hence the appeal.

(b) **Section 108 (2) of the Industrial Relations Act.**

The section provides:

“Any employee who has reasonable cause for believing that his services have been terminated or that he has suffered any other penalty or disadvantages on any of the grounds set out in subsection (i) may within thirty days of the occurrence or occurrences which may give rise to such belief, lay a complaint before the Industrial Relations Court and the court shall if it finds in favour of the complainant, grant to him such remedy as it deems fit including re – instatement for loss of employment”. It therefore means that the termination was unfair and as reinstatement is the best with adequate damages.

In **ZAMBIA PRIVATISATION AGENCY v JAMES MATALE (1996) S.J.** ... The contract of employment made no provision for prior termination and the Court ... was a proper and lawful way of terminating the respondent's on the basis that in the .... marital status, religion, political opinion or affiliation, tribe extraction or social status. Therefore, in this case it may be said that the type of dismissal is unfair dismissal as the reasons for the dismissal were not justified. A different opinion may also be accepted provided the reasons are clearly stated with authorities to support them.

(b) Summary dismissal is dismissal without notice. ... An employer has a legal right to summarily dismiss an employee without notice for serious misconduct or other conduct which justifies such dismissal. Summary dismissal of an employee should be exercised most carefully and usually only in exceptional circumstances. Whereas, unlawful dismissal is different. Unlawful dismissal otherwise known as unfair dismissal is the type of dismissal where the reasons for dismissal cannot be justified e.g. dismissing a person on grounds of discrimination such sex, religious or political affiliation.

END OF SOLUTIONS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   Section A: One (1) Compulsory question.
   Section B: Five (5) Optional Questions. Attempt any four (4) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A: - (COMPULSORY)

Attempt all ten (10) multiple choice questions in this section.

Each of the following questions has only one correct answer. Write the letter of the correct answer you have chosen in your answer booklet. Marks allocated are indicated against each question.

1.1. Managers need to be able to see and understand the complexities of the business and its environment. Which managerial skills will be required for a manager to do this?

   A. Social skills
   B. Technical skills
   C. Conceptual skills
   D. Leadership skills

   (2 marks)

1.2. Interviews generally are by far the most popular selection method used by organizations.

   Which of the following is an advantage of panel interview?

   A. They offer opportunities to assess candidate’s personal appearance.
   B. Assesses the candidate’s key competences through aptitude tests.
   C. They are conducted in a short period of time.
   D. They save time as many people are on the panel

   (2 marks)

1.3. A person is driven by friendly relationships and motivated by interaction with other people.

   According to McClelland’s need based theory of motivation, this person has…………….

   A. Need for Power (n-pow)
   B. Need for community work
   C. Need for affiliation (N-affil)
   D. Need for achievement (N-ach)

   (2 marks)

1.4. …………………………….. is the change that requires substantial restructuring of the organisation with its procedures and systems.

   A. Planned change
   B. Unplanned change
   C. Incremental change
   D. Transformational change

   (2 marks)
What is the legal principle which states that a shareholder is not held responsible for the debt owed by the company called?

A. Separate legal personality
B. Limited liability
C. Unlimited liability
D. Perpetual existence

What is an organizational culture which deals with a formal organisational structure with well-established rules and procedures called?

A. Power culture
B. Role culture
C. Person culture
D. Task culture

Which of the following is NOT part of the operational strategy functions?

A. Competitive Advantage
B. Competitive advantage
C. Marketing activities
D. Information systems

Transformational leaders must be skilled in areas below to foster high morale among subordinates and increased productivity EXCEPT...

A. Use of examples
B. Anticipation
C. Empathy
D. Self-enrichment

The following are advantages of micro designed jobs apart from....

A. little training
B. recognising
C. control
D. replacement

Which one of the following is an advantage of a Partnership?

A. Each member contributes capital for business expansion
B. The company is assisted by workers and the family
C. It is easy to set up.
D. There is limited liability.

[Total: 20 Marks]
SECTION B

There are FIVE (5) questions in this section. Attempt any FOUR (4) questions.

QUESTION TWO

(a) Zambia is headed for a greater growth in agriculture as government continues to call for diversification in agriculture, other than depending on copper all the time. Mr. Mweemba has heeded to this call and would like to join a cooperative in order to improve his farming skills and productivity.

Required:
Explain to Mr. Mweemba the four (4) benefits of joining a cooperative that he would appreciate.

(8 marks)

(b) Relationships and motivation are important in every area of life including organisational life. Briefly explain how each of them contributes to productivity and growth of the organisation.

(12 marks)

[Total: 20 Marks]

QUESTION THREE

(a) Mr. Sakapoti is a manager and is worried about who will succeed him when he leaves the company or if something were to happen to him. Advise Mr. Sakapoti on any five (5) ways managers can use to develop future leadership succession plans.

(10 marks)

(b) The government of Zambia has continued to advocate for decentralisation of most government departments and this has been welcomed by most citizens who believe it will bring services closer to the people.

Explain any five (5) factors that influence the extent of centralisation and decentralisation.

(10 marks)

[Total: 20 Marks]

QUESTION FOUR

(a) Justify the existence of the human resource department in an organisation.

(10 marks)

(b) By citing examples, explain non-profit making organisations.

(10 marks)

[Total: 20 Marks]
QUESTION FIVE
(a) Douglas McGregor suggested that managers tend to behave as though they subscribed to two sets of assumptions about people at work; Theory X and Theory Y.

Identify and explain the correct theory a Mr. Bwalya, who is an authoritarian and likes close supervision, would apply. (4 marks)

(b) Briefly explain the following concepts which relate to Maslow’s hierarchy of needs.
(i) Esteem needs (2 marks)
(ii) Self-actualization needs (2 marks)
(iii) Physiological needs (2 marks)

(c) List any five (5) external triggers to organizational change (10 marks)

[Total: 20 marks]

QUESTION SIX
(a) Henri Fayol suggested fourteen (14) principles of management, which are now associated with the ‘classical’ school of management theory. Explain the following principles which relate to management process:
(i) Scalar chain (3 marks)
(ii) Unit of command (3 marks)
(iii) Esprit de corps (2 marks)

(b) Delegation means handing authority down from a higher level to a lower level of management in the organization.

State any four (4) benefits of delegation in an organization (4 marks)

(c) Strategic decisions have some characteristics that make them different from other decisions by business managers.

Outline any four (4) characteristics of strategic decisions (8 marks)

[Total: 20 marks]

END OF PAPER
SOLUTION ONE

1.1 C
1.2 A
1.3 C
1.4 D
1.5 B
1.6 B
1.7 A and B
1.8 D
1.9 B
1.10 A

SOLUTION TWO

A. The main benefits of co-operatives are:
   i. Cooperatives help members develop their businesses through shared effort, activities and assets, families will benefit economically and socially, training programmes can also help members to develop skills that help them to run their businesses better or develop new business operations.
   ii. By acting together, members of co-operatives are able to produce sufficient quantities of goods to give them negotiating power with merchants who buy them.
   iii. They are democratic organisations, and cannot be dominated by wealthy individuals. They often produce goods for local community, and when they operate successfully they can win the trust of their local customers.
   iv. Cooperatives have contributed to the economic and social development of Zambia, especially in agriculture, and cooperative benefit from their national organisation structure.

B. The following are the contribution of relationships and motivation to organisational growth
   i. Relationships- add value to the organisation because when human beings exist in harmony they are able to build one another morally and spiritually this will make them feel good about reporting for work looking forward to be and work with friends and share the joys of working together which is the basis of human relations.
   ii. Motivation- is process which will mobilise behaviour and sustain the interest of achieving organisational goals. This is aroused when the employees feel appreciated and are awarded with both intrinsic and extrinsic reward by their employers.
SOLUTION THREE

A. The following are the several methods that can be used to develop future managers:
   i. Delegation- individuals can be motivated and also get the ability to develop through delegation of authority, or participation in decision-making by a team. Individuals need to learn how to make decisions, and the potential consequences of their decisions, through experience.
   ii. Job rotation-moving an individual from one job to another so that he learns about the work done in each job. The breadth of experience that the individual gains will valuable when or she is promoted to a more senior position.
   iii. Secondment- sending an individual to work somewhere else for a period of time e.g. to work in different department or to be a member of a project team. Individuals are able to develop their skills and experience because they benefit from working with people from different parts of the organisation.
   iv. Deputising for a manager or supervisor-an individual may be given the opportunity to deputise a boss is absent from work for a length period.
   v. Performance appraisal-performance appraisal giving an individual feedback on how they have been doing their job and whether they have been successful in achieving the performance targets. The individual is also given chance to assess how they have developed since the last appraisal.
   vi. Mentoring- the skills and effectiveness of individuals in their work can be improved by mentoring, i.e. giving guidance and advice and it prepares a high-flying junior manager for leadership role in the future.
   vii. Training- giving training particularly in management skills, can also help an individual to improve and develop.

B. The factors that influence the extent of centralisation and decentralisation are:
   i. The size of the organisation: as the organisation grows in size, more decentralisation in decision making is needed to retain efficiency
   ii. The geographical separation of different parts of the organisation: in an organisation that is spread over a wide geographical area.
   iii. The mission or objectives of the organisation will drive most decisions relating to its structure and management,
   iv. The nature and type of organisation. For example public sector organisations are likely to have centralised decision making structure, with many key decisions reserved for senior management t or possibly the government.
   v. The output that the organisation provided and its markets: for example, service organisations that work on a project basis would require a more decentralised, or even matrix structure organisation
   vi. The management style used in the organisation: centralised structures tend to suit for example, decisions making more bureaucratic organisations.
SOLUTION FOUR

(a) The Human Resource Department is important in an organisation for the following Reasons:

1. Helps the employer to interpret the various labour laws that must be complied with such as health and safety act, national minimum wage, Factory Act etc.
2. Helps in developing the human resource policies that guide employees on the do and don’ts.
3. Development of policies that motivate employees such as giving out bonuses, provision of transport to employees, accommodation etc.
4. Human resource plan and train employees to enhance productivity.
5. Helps to reduce labour turnover by ensuring that workers conditions of service are attractive therefore workers get motivated.
6. Human resource attends to employee’s grievances in a fair and transparent manner.

(b) Non-profit making organizations are organizations established with the goal of providing the services or goods to the public (community) without making a profit. They usually help the people who are less privileged. The sources of finance are member contribution, donations or fundraising ventures. They are registered with the registrar of societies. They exist in the form of:

i. Charities and professional bodies: These are usually run by a board elected by members and managed by the professional staff.

ii. Clubs and societies: They are run by an elected committee comprising of a chairperson, treasure, secretary and other committee members. Running of the club or society is based on the drawn constitution.

Examples of non-profing making organizations are:

1. **World Vision.**
   Provide health and education services and infrastructures mostly in the rural.

2. **Red cross**
   Provide health services, shelter and food to people in need.

3. **United Nations**
   Provide various services to the people in such as food, health, education etc.
SOLUTION FIVE

a) Theory X
States that people are naturally lazy, dislike work and will avoid it where possible. Therefore employees require direction and must be controlled, threatened with punishment and coerced to get them to work. A manager should apply strictly supervision to get work done.

b) i. Esteem needs- these are a desire for self-respect, sense of personal achievement and recognition from others.
   ii. Self-actualisation – the desire for personal growth, self-fulfillment and the realization of individual’s full potential.
   iii. Physiological needs - basic needs for human survival such as need for food, clothing, shelter and other sensory desires.

c) External triggers to change
- Political change
- Economic
- Social and cultural
- Technological
- Ecological/environmental
- Legal

SOLUTION SIX

a) 
   i) scalar chain- there should be a clear chain of command and reporting authority
   ii) Unit of command- Each employee must receive instructions from only one superior to avoid conflicting instructions
   iii) Esprit de corp- Promote team spirit throughout the organization

b) Benefits of delegation
- Decision making is left with people with local knowledge and skill
- Give senior managers with more time to deal with strategic issues
- it is a means of training and development
- improves making in terms of speed where the organization is widespread
- Lessen workload on senior management
- it motivates the workforce
c) Characteristics of strategic decisions

- They are broad in scope and less detail
- They are complex more factors have to be considered
- Affect the entire organization
- Uncertainty on their consequences
- Affect operational decisions at lower level
- They are concerned with longer time horizon
- They cut across several functional areas

END OF SOLUTIONS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:

   Section A: There are two (2) compulsory questions.
   Section B: There are three (3) questions. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A

Both questions in this Section are compulsory and must be attempted.

QUESTION ONE

Prism Plc holds investments in two other entities, Sphere Plc and Annulus Plc. Prism Plc purchased 200,000 shares in Sphere Plc on 1 April 2016, by issuing one share in Prism for every two shares bought in Sphere. This share issue has not yet been recorded by Prism. The retained earnings of sphere on the date of acquisition were K175,000.

The market price of Prism’s shares at 1 April 2016, was K6 per share and the market price of Sphere’s shares at the same date was K2.40.

Prism also purchased 100,000 shares in Annulus on 1 April 2015 for a cash payment of K1.60 per share. The retained earnings of Annulus on the date of acquisition were K75,000.

All three entities prepare financial statements to 31 March and the statements of financial position of the three entities at 31 March 2017 were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Prism</th>
<th>Sphere</th>
<th>Annulus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Non-current Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property Plant and Equipment</td>
<td>625,000</td>
<td>425,000</td>
<td>375,000</td>
</tr>
<tr>
<td>Investments</td>
<td>160,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>785,000</td>
<td>425,000</td>
<td>375,000</td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>165,000</td>
<td>150,000</td>
<td>140,000</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>215,000</td>
<td>150,000</td>
<td>155,000</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>55,000</td>
<td>50,000</td>
<td>45,000</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>435,000</td>
<td>350,000</td>
<td>340,000</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>1,220,000</td>
<td>775,000</td>
<td>715,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equity and Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share capital (K1 share)</td>
<td>350,000</td>
<td>250,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>275,000</td>
<td>220,000</td>
<td>140,000</td>
</tr>
<tr>
<td><strong>Total Equity</strong></td>
<td>625,000</td>
<td>470,000</td>
<td>390,000</td>
</tr>
<tr>
<td><strong>Non-current Liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long term borrowings</td>
<td>250,000</td>
<td>125,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Deferred Tax</td>
<td>175,000</td>
<td>60,000</td>
<td>85,000</td>
</tr>
<tr>
<td><strong>Total non-current liabilities</strong></td>
<td>425,000</td>
<td>185,000</td>
<td>195,000</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>125,000</td>
<td>85,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Current tax payables</td>
<td>45,000</td>
<td>35,000</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>170,000</td>
<td>120,000</td>
<td>130,000</td>
</tr>
<tr>
<td><strong>Total equity and liabilities</strong></td>
<td>1,220,000</td>
<td>775,000</td>
<td>715,000</td>
</tr>
</tbody>
</table>
The following additional information is relevant:

(i) The date of acquisition, the fair values of Sphere’s assets were equal to their carrying amounts with an exception of:

- A non-depreciable land with a carrying amount of K250,000 that had a fair value of K300,000.
- Plant and machinery with a carrying amount of K150,000 and a Fair value of K190,000. The estimated future economic life of plant and machinery at 1 April 2016 was four years (straight line depreciation).

(ii) At 1 April 2016, Sphere had a long standing portfolio of loyal customers that regularly ordered goods and services from Sphere. The customer relationship was not included in the statement of financial position of Sphere on 31 March 2016 because directors did not consider that they met the recognition criteria in IAS 38, Intangible Assets for internally developed intangible assets.

The directors of Prism considered that the customer relationship had a fair value of K100,000 at 1 April 2016 and that based on the life cycle of the existing products, the existing customers would continue to order goods and services from Sphere for at least five years from the date of acquisition.

(iii) The inventories of Sphere and Annulus at 31 March 2017 included components purchased from Prism during the year at cost of K100,000 to Sphere and K80,000 to Annulus. Prism supplied these components at cost plus a mark-up of 25%.

(iv) Trade receivables of Prism include K25,000 receivable from Sphere and K20,000 receivable from Annulus in respect of the purchase of components in note (iii) above. The trade payables of Sphere and Annulus include an equivalent amount payable to Prism.

(v) An impairment test at 31 March 2017 on consolidated goodwill revealed that it should be written down by K5,000. Investment in Annulus has not suffered any impairment loss.

(vi) It is group policy to measure non-controlling interest at fair value. The fair value of non-controlling interest in Sphere at the date of acquisition is to be calculated using the fair value of shares of Sphere at acquisition.

**Required:**

Prepare the consolidated statement of financial position for Prism Group as at 31 March 2017. 
[Total: 25 Marks]
**QUESTION TWO**

Below is a trial balance of Kaloza Ltd. as at 30 June 2017

<table>
<thead>
<tr>
<th></th>
<th>Dr</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative costs</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>Selling and distribution costs</td>
<td>140,000</td>
<td></td>
</tr>
<tr>
<td>Finance costs</td>
<td>10,088</td>
<td></td>
</tr>
<tr>
<td>Cost of sales</td>
<td>200,000</td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>800,000</td>
<td></td>
</tr>
<tr>
<td>Inventory at 30 June 2017</td>
<td>92,000</td>
<td></td>
</tr>
<tr>
<td>Deferred Tax (iv)</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>Current Tax (iv)</td>
<td>16,000</td>
<td></td>
</tr>
<tr>
<td>Plant and Equipment at cost</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>Land and Buildings at cost</td>
<td>224,000</td>
<td></td>
</tr>
<tr>
<td>Accumulated Depreciation at 1 July 2016:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant and equipment (i)</td>
<td>12,000</td>
<td></td>
</tr>
<tr>
<td>Buildings (i)</td>
<td>36,000</td>
<td></td>
</tr>
<tr>
<td>Operating Licence (iii)</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>251,200</td>
<td></td>
</tr>
<tr>
<td>Other receivables</td>
<td>165,912</td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>Provision for litigation (vi)</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td>8% Loan notes (ii)</td>
<td>126,100</td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>18,900</td>
<td></td>
</tr>
<tr>
<td>Share capital K0.50 (v)</td>
<td>240,000</td>
<td></td>
</tr>
<tr>
<td>retained earnings</td>
<td>80,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,382,100</strong></td>
<td><strong>1,382,100</strong></td>
</tr>
</tbody>
</table>

**Additional information**

(i) The cost of Land and Buildings includes Land cost of K80,000. Buildings had an estimated life of 20 years on purchase and are depreciated using straight line method.

Plant and equipment had an estimated life of 10 years on purchase and are depreciated using straight line method.

There were no disposals or additions to Non current assets during the year. However, an Impairment review conducted on 30 June 2017 showed that plant and equipment had a fair value less costs to sale of K92,000 while its value in use was K88,000.

All depreciation is allocated to cost of sales, selling and distribution and administrative costs in the proportion of 75%, 15% and 10% respectively.

(ii) The 8% loan note was issued on 1 July 2016 at its nominal value of K126,100 and incurred direct issue costs amounting to K600. These have been included in the administrative
costs in the above trial balance. All interest payable for the year was paid before 30 June 2017 and is included in finance costs in the above trial balance. The loan note is redeemable on 30 June 2019 at a substantial premium which gives an effective interest rate of 10%.

(iii) The Operating license was acquired on 1 January 2017 for Kaloza Ltd’s new line of products and remains effective for five years up to 1 January 2021. Operations in the new line of products commenced on 1 February 2017. Amortization cost is to be included in administrative costs.

(iv) A provision for income tax for the year ended 30 June 2017 of K14,000 is required. The balance on the current tax account in the trial balance represent an under or over provision of tax liability for the year ended 30 June 2016.

At 30 June 2017, the required deferred tax provision is K23,500. All adjustments to deferred tax should be taken to statement of profit or loss.

(iv) On 20 May 2017, Kaloza Ltd. issued an additional 200,000 shares for cash at K0.80 per share. No record has yet been made in Kaloza Ltd’s books about this transaction.

(v) Additionally, on 25 June 2017, Directors of Kaloza Ltd. Declared a dividend payment of K0.20 per share for all shares in issue on 30 June 2017. No interim dividends were paid during the year.

(vi) The lawyers handling the litigation case for Kaloza have advised on the need to increase the provision by K3,000 at 30 June 2017.

**Required:**

Prepare for Kaloza Ltd., the following in accordance with applicable IFRSs.

(a) Statement of profit or loss and other comprehensive income for the year ended 30 June 2017. (10 marks)

(b) Statement of changes in equity as at 30 June 2017. (3 marks)

(c) Statement of financial position as at 30 June 2017. (12 marks)

[Total: 25 Marks]
SECTION B

There are THREE (3) questions in this section. Attempt any TWO (2) questions.

QUESTION THREE

Mango Plc has a strategy of growth by acquisition. Apple Limited and Orange Limited have been identified as potential acquisitions; however, only one entity can be acquired. The target entities are of a similar size and operate in the agricultural sector. You are the management accountant of Mango and management wants you to analyse the financial performance and financial position of each entity using profitability, liquidity and gearing ratios below.

(i) Gross profit margin
(ii) Profit before interest and tax
(iii) Return On Capital Employed (ROCE)
(iv) Non-current asset turnover (Revenue/Capital employed)
(v) Inventory days
(vi) Trade receivables collection period
(vii) Trade payables payment period
(viii) Debt/equity ratio

The statements of profit or loss for the year ended 31 December 2017 are shown below:

<table>
<thead>
<tr>
<th></th>
<th>Apple</th>
<th>Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K’ 000</td>
<td>K’ 000</td>
</tr>
<tr>
<td>Sales revenue</td>
<td>7,600</td>
<td>8,800</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>(5,400)</td>
<td>(5,640)</td>
</tr>
<tr>
<td>Gross profit</td>
<td>2,200</td>
<td>3,160</td>
</tr>
<tr>
<td>Distribution costs</td>
<td>(750)</td>
<td>(840)</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>(336)</td>
<td>(1,288)</td>
</tr>
<tr>
<td>Finance cost</td>
<td>(50)</td>
<td>(64)</td>
</tr>
<tr>
<td>Profit before tax</td>
<td>1,064</td>
<td>968</td>
</tr>
<tr>
<td>Income tax</td>
<td>(319)</td>
<td>(339)</td>
</tr>
<tr>
<td>Profit for the year</td>
<td><strong>745</strong></td>
<td><strong>629</strong></td>
</tr>
</tbody>
</table>

Statements of financial position extracts as at 31 December 2017

<table>
<thead>
<tr>
<th></th>
<th>Apple</th>
<th>Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K’ 000</td>
<td>K’ 000</td>
</tr>
<tr>
<td>Non-current assets</td>
<td>3,400</td>
<td>3,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>2,400</td>
<td>1,640</td>
</tr>
<tr>
<td>Trade receivables</td>
<td>2,600</td>
<td>1,800</td>
</tr>
<tr>
<td>Total equity</td>
<td>3,500</td>
<td>4,000</td>
</tr>
<tr>
<td>Non-current liabilities (interest bearing Loan notes)</td>
<td>2,200</td>
<td>1,000</td>
</tr>
<tr>
<td>Trade payables</td>
<td>2,700</td>
<td>1,440</td>
</tr>
</tbody>
</table>

The following additional information is relevant:

(i) Apple distribution costs include K700, 000 profit on disposal of the vehicle which was used to distribute apples to customers.
(ii) Apple has investment property and the fair value gain on investment property of K40, 000 has been deducted from finance cost.

(iii) Orange pays corporate tax at 35% while Apple pays corporate at 30%, because it enjoys a tax incentive, because government wants to promote apple farming.

(iv) Apple uses FIFO to value its inventory while Orange uses AVCO.

(v) Apple has a business strategy of empowering local farmers by giving them short-term loans while Orange’s strategy is purchasing oranges from farmers and selling them to super markets throughout the country.

(vi) Apple sells apples throughout the year while Orange’s business is seasonal.

(vii) Shareholders of both entities are willing to sell their entities to Mango Plc.

Required:

(a) Calculate profitability, liquidity and gearing ratios above for both entities based on the above financial statements.  
(8 marks)

(b) Comment on the financial performance and financial position of both entities using the ratios calculated in (a) and recommend the most suitable target entity for Mango Plc.  
(12 marks)

(c) Explain the limitations of comparing Apple and Orange using ratios analysis using additional relevant information in the scenario above.  
(5 marks)

[Total: 25 Marks]

QUESTION FOUR

(a) On 1 January 2016 Holiday Masters Co, a hotel, acquired a building from Buildcon Co under a finance lease. The cash price of the building was K385, 500. The agreement required the immediate payment of a K100, 000 deposit with the balance being settled in four equal annual instalments commencing on 31 December 2016. The interest rate implicit in the lease is 15% per year. Useful life of the asset is 5 years.

Required:

Calculate the amounts to be reported according to IAS 17 Leases in:

(i) The statement of profit or loss for the year ended 31 December 2016.  
(2 marks)

(ii) The statement of financial position as at 31 December 2016.  
(5 marks)
(b) On 1 January 2017 Manda Hill Co borrowed K75,000,000 to finance the construction of Great North mall and East Park Mall, both of which were expected to take a year to build. Construction started during 2017. The loan facility was drawn down on 1 January 2017, and was utilised as follows, with the remaining funds invested temporarily.

<table>
<thead>
<tr>
<th></th>
<th>Great North Mall</th>
<th>East Park Mall</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 January 2017</td>
<td>12,500</td>
<td>25,000</td>
</tr>
<tr>
<td>1 July 2017</td>
<td>12,500</td>
<td>25,000</td>
</tr>
</tbody>
</table>

The loan rate was 12% and Manda Hill Co can invest surplus funds at 10%.

**Required:**

Calculate the borrowing costs which may be capitalised for each of the assets and consequently the cost of each asset (Mall) as at 31 December 2017 according to IAS 23 borrowing costs. Ignore compound interest.

(10 marks)

(c) Obama Health Care began developing a new malaria drug during 2017, expenditure incurred was K500,000, of which K350,000 was incurred before 31 March 2017 and K150,000 between 1 April 2017 and 30 June 2017. On 1 April 2017 the drug passed the technical feasibility test and it was probable that it will generate annual profit of K85,000 for 5 years from date of commissioning on 1 July 2017. The drug has a 1 year warranty from date of purchase.

**Required:**

(i) Explain how the expenditure relating to the malaria drug above should be treated in the financial statements for the period to 31 December 2017 according to IAS 38 Intangible non-current assets.

(5 marks)

(ii) Explain the recognition criteria for a provision according to IAS 37 Provisions, contingent Liabilities and Contingent assets.

(3 marks)

[Total: 25 Marks]
QUESTION FIVE

(a) The Conceptual Framework deals with:

(i) The objective of financial statements
(ii) The qualitative characteristics that determine the usefulness of information in financial statements.
(iii) The definition, recognition and measurement of the elements of financial statements.
(iv) Concepts of capital and capital maintenance

Required:
Explain the two fundamental qualitative characteristics of financial statements and the elements of statement of financial position.

(10 marks)

(b) Most multinational companies prepare their financial statements that comply with IFRSs/IASs as they feel the move towards IFRSs/IASs global harmonisation has more benefits than costs.

Required:
Explain FIVE (5) benefits of IFRSs/IASs global harmonisation to multinational companies.

(5 marks)

(c) Zambia is moving from cash based IPSASs to accruals based IPSASs and Zambia Institute of Chartered Accountants (ZICA) has been conducting IPSASs workshops for public sector organisations to ensure that transition is successful and these organisations get the benefits of accruals based IPSASs.

Required:
Explain FIVE (5) benefits of accruals based IPSASs to public sector organisations.

(10 marks)

[Total: 25 Marks]

END OF PAPER
### DA 8 FINANCIAL REPORTING SOLUTIONS

#### SOLUTION ONE

**Prism Group Statement of financial position as at 31 March 2017**  

<table>
<thead>
<tr>
<th>Financial Position</th>
<th>'K'</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non current assets</strong></td>
<td></td>
</tr>
<tr>
<td>Property, plant and Equipment</td>
<td>1,130,000</td>
</tr>
<tr>
<td>Goodwill</td>
<td>100,000</td>
</tr>
<tr>
<td>Investment in Annulus</td>
<td>179,600</td>
</tr>
<tr>
<td>Intangible non current asset</td>
<td>80,000</td>
</tr>
<tr>
<td><strong>Total non current assets</strong></td>
<td>1,489,600</td>
</tr>
<tr>
<td><strong>Current assets</strong></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>295,000</td>
</tr>
<tr>
<td>Receivables</td>
<td>340,000</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>105,000</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td>740,000</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>2,229,600</td>
</tr>
<tr>
<td><strong>Equity and liabilities</strong></td>
<td></td>
</tr>
<tr>
<td>Equity shares</td>
<td>450,000</td>
</tr>
<tr>
<td>Share premium</td>
<td>500,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>282,600</td>
</tr>
<tr>
<td><strong>Non controlling interest</strong></td>
<td>122,000</td>
</tr>
<tr>
<td><strong>Total equity and liabilities</strong></td>
<td>1,354,600</td>
</tr>
<tr>
<td><strong>Non current liabilities</strong></td>
<td></td>
</tr>
<tr>
<td>Long term borrowing</td>
<td>375,000</td>
</tr>
<tr>
<td>Deferred tax</td>
<td>235,000</td>
</tr>
<tr>
<td><strong>Total non current liabilities</strong></td>
<td>610,000</td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
</tr>
<tr>
<td>Trade and other payables</td>
<td>185,000</td>
</tr>
<tr>
<td>Current tax payable</td>
<td>80,000</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td>265,000</td>
</tr>
</tbody>
</table>
Total equity and liabilities: 2,229,600

WORKINGS

1. Group structure

<table>
<thead>
<tr>
<th></th>
<th>Date acquired</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prism</td>
<td>1.4.16</td>
<td>1 year</td>
<td>1.4.15</td>
</tr>
<tr>
<td>Sphere</td>
<td></td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Annulus</td>
<td></td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>

Investment of Prism into Sphere = 200,000 shares / 250,000 x 100 = 80%
Investment of Prism into Annulus = 100,000 shares / 250,000 x 100 = 40%

2. Net Goodwill on acquisition of Sphere

<table>
<thead>
<tr>
<th></th>
<th>'K'</th>
<th>'K'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase consideration:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share exchange</td>
<td>600,000</td>
<td></td>
</tr>
<tr>
<td>Fair value of NCI at acquisition</td>
<td>120,000</td>
<td></td>
</tr>
</tbody>
</table>

Less net assets acquired:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share capital</td>
<td>250,000</td>
</tr>
<tr>
<td>Pre-acquisition retained earnings</td>
<td>175,000</td>
</tr>
<tr>
<td>Fair value adjustments (W3)</td>
<td>190,000</td>
</tr>
</tbody>
</table>

(615,000)

Gross Goodwill 105,000
Less impairment loss (5,000)
Net goodwill 100,000

Alternatively, the following working could be used to ascertain net assets at acquisition and hence post acquisition retained earnings.
NET ASSET OF SUBSIDIARY:

<table>
<thead>
<tr>
<th></th>
<th>At Acquisition</th>
<th>At Reporting</th>
<th>Post Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share capital</td>
<td>250,000</td>
<td>250,000</td>
<td>-</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>175,000</td>
<td>220,000</td>
<td>45,000</td>
</tr>
</tbody>
</table>

Fair values:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>50,000</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>Plant and machinery</td>
<td>40,000</td>
<td>40,000</td>
<td>-</td>
</tr>
<tr>
<td>Fair value dep’n-plant (w3)</td>
<td>(10,000)</td>
<td>(10,000)</td>
<td></td>
</tr>
<tr>
<td>Customer r/ship</td>
<td>100,000</td>
<td>100,000</td>
<td>-</td>
</tr>
<tr>
<td>Fair value amortization (w3)</td>
<td>(20,000)</td>
<td>(20,000)</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>615,000</td>
<td>630,000</td>
<td>15,000</td>
</tr>
</tbody>
</table>

3. Fair value adjustments

<table>
<thead>
<tr>
<th></th>
<th>'K'</th>
<th>'K'</th>
<th>'K'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>50,000</td>
<td>-</td>
<td>50,000</td>
</tr>
<tr>
<td>Plant and machinery</td>
<td>40,000</td>
<td>(10,000)</td>
<td>30,000</td>
</tr>
<tr>
<td>Customer relationship</td>
<td>100,000</td>
<td>(20,000)</td>
<td>80,000</td>
</tr>
</tbody>
</table>

i) Depreciation on Fair value adjustment of plant and machinery: K40,000/4 years = K10,000 per annum.

ii) Amortization of customer relationship: K100,000/5 years = K20,000 per annum.

4. Consolidated retained earnings

<table>
<thead>
<tr>
<th></th>
<th>Prism</th>
<th>Sphere</th>
<th>Annulus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balances per question</td>
<td>275,000</td>
<td>220,000</td>
<td>140,000</td>
</tr>
<tr>
<td>Less pre-acquisition retained Earn.</td>
<td>(175,000)</td>
<td>(75,000)</td>
<td></td>
</tr>
<tr>
<td>Less additional depreciation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant and machinery</td>
<td>(10,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer relationship</td>
<td>(20,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15,000</td>
<td>65,000</td>
<td></td>
</tr>
</tbody>
</table>
Unrealized profit:
Prism to Annulus (25/125 x 100,000 x 40%) \( \text{\( \times \) } 40\% \) \( \text{\( = \) } 6,400 \)
Prism to sphere (25/125 x 100,000) \( \text{\( = \) } 20,000 \)
Prism’s share of Sphere’s PARE:
\( \text{\( (80\% \times 15,000) \text{\( = \) } 12,000 \)} \)
Prism’s share of Annulus’ PARE:
\( \text{\( (40\% \times 65,000) \text{\( = \) } 26,000 \)} \)
Prism’s share of impairment loss:
\( \text{\( (80\% \times 5,000) \text{\( = \) } 4,000 \)} \)
Consolidated retained earnings \( \text{\( = \) } 282,600 \)

5. Provision for unrealized profit
i) Prism to Annulus
\( \frac{25}{125} \times 80,000 \times 40\% = 6,400 \)
Double entry for this is: ‘K’
Dr Group retained earnings \( \text{\( = \) } 6,400 \)
Credit Investment in associate \( \text{\( = \) } 6,400 \)
ii) Prism to Sphere
\( \frac{25}{125} \times 100,000 = 20,000 \)
Double entry: ‘K’
Dr Group Retained earnings \( \text{\( = \) } 20,000 \)
Cr Group inventory \( \text{\( = \) } 20,000 \)

6. Carrying amount of Investment in Annulus at reporting date: ‘K’
Cost of investment in Annulus (K1.60 x 100,000 shares) \( \text{\( = \) } 160,000 \)
Add: Prism’s share of Annulus’ post acquisition retained earnings:
\( \text{\( (40\% \times 65,000) \text{\( = \) } 26,000 \)} \)
Less: Provision for unrealized profit (W5) \( \text{\( (6,400) \}) \)
Carrying amount of investment in Annulus \( \text{\( = \) } 179,600 \)

7. Non controlling interest at reporting date:
NCI at acquisition (W2) \( \text{\( = \) } 120,000 \)
Add: NCI share of Sphere’s post acquisition retained earnings
\( \text{\( (20\% \times 15,000) \text{\( = \) } 3,000 \)} \)
Less: NCI share of impairment loss of Goodwill (20% x 5000) \( \text{\( (1,000) \}) \)
Carrying amount of NCI at reporting date \( \text{\( = \) } 122,000 \)
8. Share capital and share premium from purchase consideration of Sphere

\[ \frac{200,000}{2} = 100,000 \text{ shares} \]

\[ \begin{array}{c}
\times K1 \\
K100,000 \\
\rightarrow \text{to share capital account}
\end{array} \quad \begin{array}{c}
\times K5 \\
K500,000 \\
\rightarrow \text{to share premium account}
\end{array} \]

**SOLUTION TWO**

a) Kaloza Ltd’s Statement of profit or loss and other comprehensive income for the year ended 30 June 2017.

\[
\begin{align*}
\text{Revenue} & \quad 800,000 \ K \\
\text{Cost of sales (w5)} & \quad (217,400) \ K \\
\text{Gross profit} & \quad 582,600 \\
\text{Administrative costs (w5)} & \quad (126,720) \ K \\
\text{Selling and distribution costs (w5)} & \quad (143,480) \ K \\
\text{Operating profit} & \quad 3312,400 \\
\text{Finance cost (w1)} & \quad (12,550) \ K \\
\text{Profit before tax} & \quad 299,850 \\
\text{Income tax (w6)} & \quad (33,500) \ K \\
\text{Profit for the year} & \quad 266,350
\end{align*}
\]

b) Kaloza Ltd’s statement of changes in equity as at 30 June 2017

<table>
<thead>
<tr>
<th>Share capital</th>
<th>Share premium</th>
<th>Retained earnings</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘K’</td>
<td>‘K’</td>
<td>‘K’</td>
<td>‘K’</td>
</tr>
<tr>
<td>Balances b/f</td>
<td>240,000</td>
<td>-</td>
<td>80,000</td>
</tr>
<tr>
<td>Profit for the year</td>
<td>266,350</td>
<td>266,350</td>
<td></td>
</tr>
<tr>
<td>New share issue</td>
<td>100,000</td>
<td>60,000</td>
<td>160,000</td>
</tr>
<tr>
<td>Dividends declared</td>
<td>----------</td>
<td>(136,000)</td>
<td>(136,000)</td>
</tr>
</tbody>
</table>
c) Kaloza Ltd’s Statement of Financial Position as at 30 June 2017

<table>
<thead>
<tr>
<th>Balances c/f</th>
<th>340,000</th>
<th>60,000</th>
<th>210,350</th>
<th>610,350</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Non Current Assets</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangible Non Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property, Plant and Equipment (W2)</td>
<td></td>
<td></td>
<td>272,800</td>
<td></td>
</tr>
<tr>
<td><strong>Intangible Non Current Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating License (W3)</td>
<td></td>
<td></td>
<td>22,000</td>
<td></td>
</tr>
<tr>
<td>Total Non Current Assets</td>
<td></td>
<td></td>
<td>294,800</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Assets</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory</td>
<td></td>
<td></td>
<td>92,000</td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td></td>
<td></td>
<td>251,200</td>
<td></td>
</tr>
<tr>
<td>Other receivables</td>
<td></td>
<td></td>
<td>165,912</td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents (18,900 + 160,000)</td>
<td></td>
<td></td>
<td>178,900</td>
<td></td>
</tr>
<tr>
<td>Total current assets</td>
<td></td>
<td></td>
<td>688,012</td>
<td></td>
</tr>
<tr>
<td>Total assets</td>
<td></td>
<td></td>
<td>982,812</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equity and Liabilities</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity shares of K0.50 each</td>
<td></td>
<td></td>
<td>340,000</td>
<td></td>
</tr>
<tr>
<td>Share premium</td>
<td></td>
<td></td>
<td>60,000</td>
<td></td>
</tr>
<tr>
<td>Retained earnings</td>
<td></td>
<td></td>
<td>210,350</td>
<td></td>
</tr>
<tr>
<td>Total equity</td>
<td></td>
<td></td>
<td>610,350</td>
<td></td>
</tr>
<tr>
<td><strong>Non current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8% loan note (W1)</td>
<td></td>
<td></td>
<td>127,962</td>
<td></td>
</tr>
<tr>
<td>Deferred tax (W6)</td>
<td></td>
<td></td>
<td>23,500</td>
<td></td>
</tr>
<tr>
<td>Total non current liabilities</td>
<td></td>
<td></td>
<td>151,462</td>
<td></td>
</tr>
<tr>
<td><strong>Current liabilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade payables</td>
<td></td>
<td></td>
<td>48,000</td>
<td></td>
</tr>
<tr>
<td>Current tax payable (W6)</td>
<td></td>
<td></td>
<td>14,000</td>
<td></td>
</tr>
<tr>
<td>Dividends payable (W4)</td>
<td></td>
<td></td>
<td>136,000</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td></td>
<td></td>
<td>23,000</td>
<td></td>
</tr>
<tr>
<td>Total current liabilities</td>
<td></td>
<td></td>
<td>221,000</td>
<td></td>
</tr>
<tr>
<td>Total equity and liabilities</td>
<td></td>
<td></td>
<td>982,812</td>
<td></td>
</tr>
</tbody>
</table>
WORKINGS

1. Carrying amount of 8% loan plus Finance cost

   \[
   \begin{align*}
   &\text{Nominal value of loan at 1/7/16 (126,100 - 600)} \quad 125,500 \\
   &\text{Add effective interest (10\% \times 125,500)} \quad 12,550 \\
   &\text{Less interest paid (8\% \times 126,100)} \quad (10,088) \\
   &\text{Carrying amount of loan note @ 30/6/17} \quad 127,962 \\
   \end{align*}
   \]

   Notes:
   - The issue costs must be subtracted from the proceeds of the loan in order to calculate the finance cost at the effective interest rate, that is K125,500 (K126,100 - K600) x 10\% giving K12,550.
   - The difference between the finance cost at EIR (12,550) and interest paid at nominal rate is added to the carrying amount net of issue costs hence there is no need to accrue this difference. This is done so as to arrive at CA of loan at 30/6/17.

2. Property, Plant and Equipment

<table>
<thead>
<tr>
<th></th>
<th>Land (K)</th>
<th>Buildings (K)</th>
<th>Plant &amp; Equipment (K)</th>
<th>Total (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost b/f @ 1/7/16</td>
<td>80,000</td>
<td>144,000</td>
<td>120,000</td>
<td>344,000</td>
</tr>
<tr>
<td>accumulated depreciation</td>
<td>--------</td>
<td>(36,000)</td>
<td>(12,000)</td>
<td>(48,000)</td>
</tr>
<tr>
<td>Carrying Amount b/f</td>
<td>80,000</td>
<td>108,000</td>
<td>108,000</td>
<td>296,000</td>
</tr>
<tr>
<td>Depreciation expense</td>
<td>--------</td>
<td>(7,200)</td>
<td>(12,000)</td>
<td>(19,200)</td>
</tr>
<tr>
<td>Impairment loss</td>
<td>--------</td>
<td>-----------</td>
<td>(4,000)</td>
<td>(4,000)</td>
</tr>
<tr>
<td>Carrying amount c/f</td>
<td>80,000</td>
<td>100,800</td>
<td>92,000</td>
<td>272,800</td>
</tr>
</tbody>
</table>
Notes:

- Straight line depreciation is simply a % applied on the original cost but both accumulated depreciation brought forward and depreciation expense for the year to be subtracted from original cost in order to arrive at the carrying amounts at the end of the year.

- For plant and equipment, the carrying amount (K96,000) at the year-end on 30 June 2017 is higher than the recoverable amount (K92,000). The asset is impaired and must be recognized at its recoverable amount. Additionally, recoverable amount is the higher of fair value less costs (K92,000) to sell and value in use (VIU), i.e. K88,000 hence K92,000 is Recoverable amount as this is higher.

3. **Intangible non current asset**

   Carrying amount of Operating License:
   
   | Cost of License at 1 January 2017 | 24,000 |
   | Less amortization up to 30 June 2017 (24,000/5 years x 5/12) | (2,000) |
   | Carrying amount at 30 June 2017 | 22,000 |

   Note:
   
   - The amortization on the license is effective from 1 February 2017 the date when the license became operational.

4. **Proceeds from the issue of shares**

   - Number of shares in existence prior to the new issue: K240,000/K0.50
     = 480,000 shares.
   - Additional issue of shares = 200,000
   - Total in issue at 30th June 2017 = 680,000 (480 +200)
   - Value of new share issue to share capital account: 200,000 x K0.50 = K100,000
   - Value of new share issue to share premium account: 200,000 shares x K0.30 = K60,000

   **Dividends declared:**

   = Total number of shares in issue at 30 June 2017 x dividends per share
   = 680,000 shares x K0.20
   = K136,000

   As the dividends were declared before the year end, they have to be deducted from retained earnings and accrued since they were not paid prior to year-end.
5.  

<table>
<thead>
<tr>
<th>Cost of sales</th>
<th>distribution</th>
<th>administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>'K'</td>
<td>'K'</td>
<td>'K'</td>
</tr>
<tr>
<td>Per trial balance</td>
<td>200,000</td>
<td>140,000</td>
</tr>
</tbody>
</table>

Depreciation expense:

75:15:10

<table>
<thead>
<tr>
<th>Buildings</th>
<th>5,400</th>
<th>1,080</th>
<th>720</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant and equipment</td>
<td>9,000</td>
<td>1,800</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Amortization of

| Operating license | 2,000 |
| Loan note issue costs | (600) |
| Increase in provision | 3,000 |

| Impairment loss | 3,000 | 600 | 400 |
| Total expense | 217,400 | 143,480 | 126,720 |

6. Income tax

Current tax:

| Provision c/f | 14,000 |
| Add under provision b/f | 16,000 |
| Debit to profit and loss | 30,000 |

Deferred tax:

| Provision c/f | 23,500 |
| Less provision b/f | (20,000) |
| Debit to profit and loss | 3,500 |

Or

Use tax expense account as follows:

<table>
<thead>
<tr>
<th>Income tax account</th>
<th>'K'</th>
<th>'K'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance b/f CT</td>
<td>16,000</td>
<td>balance b/f DT</td>
</tr>
<tr>
<td>Balance c/f CT</td>
<td>14,000</td>
<td>profit and loss (bal)</td>
</tr>
<tr>
<td>Balance c/f DT</td>
<td>23,500</td>
<td>53,500</td>
</tr>
<tr>
<td>53,500</td>
<td>53,500</td>
<td></td>
</tr>
</tbody>
</table>
SOLUTION THREE

(a) Profitability, liquidity and gearing ratios

<table>
<thead>
<tr>
<th></th>
<th>Apple</th>
<th>Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Gross profit</td>
<td>2,200/7,600 x 100 = 29%</td>
<td>3,160/8,800 x 100 = 36%</td>
</tr>
<tr>
<td>(ii) PBIT</td>
<td>1114/7,600 x 100 = 15%</td>
<td>1,032/8,800 x 100 = 12%</td>
</tr>
<tr>
<td>(iii) ROCE</td>
<td>1114/5,700 x 100 = 20%</td>
<td>1,032/5,000 x 100 = 21%</td>
</tr>
<tr>
<td>(iv) N.C.A Turnover</td>
<td>7,600/5700 = 1.33</td>
<td>8,800/5000 = 1.76</td>
</tr>
<tr>
<td>(v) Inventory days</td>
<td>2,400/5,400x365=162 days</td>
<td>1,640/5,640x365=106 days</td>
</tr>
<tr>
<td>(vi) Receivables days</td>
<td>2,600/7,600x365=125days</td>
<td>1,800/8,800x365=75days</td>
</tr>
<tr>
<td>(vii) Payables days</td>
<td>2,700/5,400x365=183days</td>
<td>1,440/5,640x365=93days</td>
</tr>
<tr>
<td>(viii) Debt/Equity ratio</td>
<td>2,200/3,500 x 100% = 63%</td>
<td>1,000/4000x100% = 25%</td>
</tr>
</tbody>
</table>

(b) Comments on the financial performance and financial position using the ratios in (a)

**Profitability** (4 Ratios)
Orange 36% gross profit margin is higher than 29% of Apple; this implies Orange controls its cost of sales better than Apple. Orange 12% profit before interest and tax is lower than 15% of Apple; this appears as though apple controls its operating expenses better than Orange, but if we reverse profit on disposal of distributing vehicle for apple, which is a one off gain and inappropriate to include for comparison purpose, Apple’s operating profit would be 414(1,064 +50-700) leading to PBIT of 5%. Effectively Orange would be a better performer and well controlling its operating expenses than Apple. The distribution costs of Apple should been K1, 450,000 if profit on disposal of K700, 000 was not deducted from distribution costs.

Orange 21% ROCE is slightly higher than 20% of Apple; this implies Orange is using its capital employed more slightly more efficiently than Apple. The other possible reason for Apple slightly lower ROCE may be due to investment property fair value adjustment. Again, if operating profit is adjusted for profit on disposal included in distribution cost, Apple ROCE reduces to 7% (414\(\frac{5700}{100}\)) showing high levels of inefficiency with which resources are used to generate profit.

Orange 1.76 non-current assets turnover is higher than 1.33 of Apple; this may be due to Orange making better use of its resources to generate more revenue. As seen in the question, Orange revenue is higher than Apple’s revenue while its capital employed that generated the higher revenue is lower than for Apple, hence the efficiency.

**Liquidity** (3 ratios)
Orange inventory days, 106 is lower than Apple days of 162; this implies Orange keeps its inventory in stock for less days, hence reducing the inventory holding costs and cost of financing inventory held. Apple would have problems in realizing cash from inventory for it to meet short term obligations. Orange receivables days, 75 are lower than Apple days of 125; this implies Orange is collecting its debts earlier than Apple, hence, improving its cash inflows. It also shows the efficiency with which Orange credit control stuff work in ensuring timely collection of receivables.
Orange payables days, 93 are lower than Apple days of 183; this implies Orange is paying its payables earlier than Apple. This may have contributed to lower cost of sales. It may be receiving early settlement discounts. Apple is likely to be using internal source of finance, which is cheaper but may be at the expense of its relationships with suppliers.

**Gearing**  
(1 ratio)  
Orange 25% debt/equity ratio is lower than 63% of Apple; this implies Orange is a low risk investment for investors’ perspective. Apple debt is more than twice of Orange debt. This will worsen its cash flow problems.

**Recommendation**  
Based on profitability, liquidity and gearing ratios analysis, I would recommend that Orange is the better prospect for acquisition since it has better profitability, liquidity and gearing ratios.

**(c) Limitations of comparing Apple and Orange using ratios analysis**

There are many limitations from the information provided, among them are:

(i) Apple distribution costs include K700,000 profit on disposal of the vehicle which was used to distribute apples to customers while Orange distribution costs do not.

(ii) Apple has investment property and the fair value gain on investment property of K40,000 has been deducted from finance cost while Orange does not have fair value adjustment in its finance cost.

(iii) Apple revalued its property while Orange did not.

(iv) Orange pays corporate tax at 35% while Apple pays corporate at 30%, this reduces Orange profit for the by 5%.

(v) Apple uses FIFO to value its inventory while Orange uses AVCO to value its inventory; this implies Orange will report lower profit when prices are rising.

(vi) Apple has a business strategy of empowering local farmers by giving them short-term loans while Orange’s strategy is purchasing oranges from farmers and sell them to super markets throughout the country, this implies the two entities have different business risks.

(vii) Apple sells apples throughout the year while Orange business is seasonal; this implies that Orange business depends of various seasonal factors e.g. changes in the climate.

(viii) The two entities sell different products, even though; they are in the agricultural sector.
SOLUTION FOUR

(a)
(i) Statement of profit or loss amounts
Depreciation charge w2 96,375
Finance cost w1 42,825

(ii) Statement of financial position amounts
P.P.E carrying amount w2 289,125
Non-current liability w1 162,574
Current liability 65,751

W1:
(385,500 - 100,000 deposit = 285,500).
Balance 1 January 2016 285,500
Interest 15% 42,825
Installment 31 December 2016 (100,000)
Balance outstanding 31 December 2016 228,325
Interest 15% 34,249
Installment 31 December 2017 (100,000)
Balance outstanding 31 December 2017 162,574

W2:
Non-current assets
Assets held under finance leases
Plant and machinery at cost 385,500
Less accumulated Dep (385,500/4) (96,375)
Carrying value 289,125

Non-current liabilities
Obligations under finance leases
(Balance at 31 December 2017) 162,574
Current liabilities
Obligations under finance leases (228,325-162,574) 65,751

(b)  
<table>
<thead>
<tr>
<th></th>
<th>Great North Mall</th>
<th>East Park Mall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>Borrowing costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To 31 December 2017: 25,000x12% = 3,000</td>
<td>50,000x12% = 6,000</td>
<td></td>
</tr>
<tr>
<td>Less investment income</td>
<td>2,375</td>
<td>4,750</td>
</tr>
<tr>
<td>To 30 June 2017: 12,500x10%x6/12 = (625)</td>
<td>25,00x10%x 6/12 (1,250)</td>
<td></td>
</tr>
<tr>
<td>Cost of assets</td>
<td>25,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Expenditure incurred</td>
<td>2,375</td>
<td>4,750</td>
</tr>
<tr>
<td>Borrowing costs</td>
<td>27,375</td>
<td>54,750</td>
</tr>
</tbody>
</table>
(c) **Treatment of expenditure**

(i) 350,000 was incurred before 31 March 2017, therefore, it should be expensed, because the recognition criteria were not met.

(ii) It will never form part of the cost of the product recognised in the statement of financial position.

(iii) 150,000 was incurred between 1 April 2017 and 30 June 2017, this should be recognised as an asset, because, on 1 April 2017 the drug passed the technical feasibility test and it was probable that it will generate annual profit of K 85,000 for 5 years from date of commissioning on 1 July 2017.

(iv) The cost of 150,000 will be amortised on a systematic basis over 5 years from 1 July 2017. Amortisation for 2017 is \( \frac{150,000}{5} \times \frac{6}{12} \) K15,000.

(ii) **Provision recognition and amount**

IA 37 states that a provision should be recognised as a liability in the financial statements when:

- An entity has a present obligation (legal or constructive) as a result of a past event.
- It is probable that an outflow of resources embodying economic benefits will be required to settle the obligation.
- A reliable estimate can be made of the amount of the obligation.

(SOLUTION FIVE)

(a) **Fundamental qualitative characteristic of financial statements**

1. **Relevance.** Relevant information is capable of making a difference in the decisions made by users. It is capable of making a difference in decisions if it has predictive value, confirmatory value or both. The relevance of information is affected by its nature and its materiality.

2. **Faithful representation.** Financial reports represent economic phenomena in words and numbers. To be useful, financial information must not only represent relevant phenomena but must faithfully represent the phenomena that it purports to represent. To be faithful representation information must be complete, neutral and free from error.

**Elements of statement of financial position**

1. **Asset.** A resource controlled by an entity as a result of past events and from which future economic benefits are expected to flow to the entity.

2. **Liability.** A present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.
(3) **Equity.** The residual interest in the assets of the entity after deducting all its liabilities.

(b) **FIVE benefits of IFRSs/IASs global harmonisation to multinational companies**

(1) Better access would be gained to foreign investor funds.

(2) Management control would be improved, because harmonisation would aid internal communication of financial information.

(3) Appraisal of foreign entities for take-overs and mergers would be more straightforward.

(4) It would be easier to comply with the reporting requirements of overseas stock exchanges.

(5) Preparation of group accounts would be easier.

(6) A reduction in audit costs might be achieved.

(7) Transfer of accounting staff across national borders would be easier.

(C) **Advantages of moving from cash based IPSASs to accruals IPSASs**

Public sector organisations need information to:

(1) Make decisions about the feasibility of financing the services it wishes to provide.

(2) Demonstrate accountability to the public on how public finances are managed.

(3) Plan for future funding requirements of assets maintenance replacement.

(4) Plan for the repayment of liabilities.

(5) Have greater control and prudent public financial management.

(6) Governments organisations will produce more relevant and faithfully represented or reliable financial statements

(7) There will be more transparency in public sector organisations.

**END OF SOLUTIONS**
DIPLOMA IN ACCOUNTANCY PROGRAMME EXAMINATIONS

LEVEL TWO

DA 9: MANAGEMENT ACCOUNTING

TUESDAY 12 JUNE 2018

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   - Section A: There are two (2) compulsory questions.
   - Section B: There are three (3) questions. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – TWO COMPULSORY QUESTIONS

Attempt both Questions in this Section.

QUESTION ONE

CA Ltd is a local innovative company which has recently launched two new product types T and L. It operates within a highly competitive market and is constantly under pressure to reduce prices. CA Ltd operates a standard costing system and performs a detailed variance analysis of its products on a monthly basis.

Extracts from the management information for the month of May 2018 are shown below:

| Total number of units made and sold | 1,120 |
| Material price variance | K179,200 (A) |

Additional information

1 The budgeted total sales volume was 944 units, consisting of an equal mix of T and L. Actual sales volume was 600 for T and 520 for L. Standard selling prices were set considering the premium nature of the products, at K2,240 per unit of the T and K1,920 per unit of the L. The actual sales prices achieved during May were K2,112 per unit of T and K1,856 per unit of L. The standard contributions for T and L were K1,216 and K1,152 per unit respectively.

2 A key reason for the material price variance was an increase in the purchase price of one of its key components A used in the products. Each T and L made requires one unit of component A, for which CA Ltd’s standard cost is K384 per unit. Due to a shortage of components in the market place, the market price for May went up to K544 per unit of A. CA Ltd actually paid K512 per unit for the component.

3 Each T takes 1.6 standard hours of labour and each L takes 1.2 standard hours of labour. The standard cost for labour is K89.6 per hour and this also reflects the actual cost per labour hour for the company’s full time workforce in May. However, because of the increase in sales and production volumes in May, the company also had to use additional temporary labour at the higher cost of K115.2 per hour. The total capacity of CA Ltd’s full time workforce is 1,364 hours production per month, assuming full efficiency. In the month of May, the full time workforce was wholly efficient, taking exactly 1.6 hours to complete each T and exactly 1.2 hours to produce each L. The total labour variance therefore relates solely to the temporary workers, who took twice as long as the full time workers to complete their production.

Required:

(a) Calculate the following for the month of May, showing clearly all workings.

   (i) The sales price variance and sales volume contribution variance. (6 marks)
   (ii) The material price planning variance and material price operational variance.
(iii) The labour rate variance and the labour efficiency variance.

(b) Explain how the information collected in part (a) (ii) can help CA Ltd in the management function of planning and control.

(5 marks)

(c) Explain the reasons why CA Ltd would be interested in the material price planning and material price operational variance.

(4 marks)

[Total: 25 Marks]

QUESTION TWO

Kumawa Limited, situated in the Eastern Province of Zambia produces two products, A and B using the same type of material and labour but in different proportions.

The company was established two years ago and has been struggling with working capital management. As a new management accountant at Kumawa Limited, you have recommended a budgetary control system to the company director, which has now been agreed. It has further been agreed to breakdown its annual budgets into four quarters each comprising thirteen (13) weeks.

The sales and production directors have provided you with the following information for the first quarter of the next budget period (year):

(i) Budget sales:

Product A  845 units
Product B  1,235 units

5% of total production for each product is defective and cannot be sold.

(ii) Resource usage:

<table>
<thead>
<tr>
<th>Material content per unit (kgs)</th>
<th>Product A</th>
<th>Product B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour per unit (Hours)</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

(iii) Material cost per Kg and labour cost per hour are K36 per Kg and K24 per hour, respectively.

(iv) There are 24 production employees working a 40 hour, 5 day week and are paid K24 per hour with overtime paid at a premium of 25%.

Employees will be expected to work at 80% efficiency level due to technical problems in the company.

(v) Opening Inventory
Raw material 2,240
Product A 163 units
Product B 361 units
(vi) Closing Inventory

Sales production volumes for the second quarter will be similar to those in the first quarter of the budget year. Based on that information, closing inventory will be as follows:

- Raw material inventory should be sufficient for 13 days’ production
- Inventory of finished units of product A should be equivalent to 6 days’ sales volume while that of product B should be equivalent to 14 days’ sales volume.

Required:
(a) Prepare for the first quarter of next year’s annual budget:
   (i) Production budget in units for product A and B. (4 marks)
   (ii) Raw material purchases budget in Kg and value. (5 marks)
   (iii) Production labour budget in hours and value. (6 marks)
(b) Explain to the director of Kumawa Limited:
   (i) Three advantages associated with an effective budgetary control system.
   (ii) The use of rolling budgets and flexible budgets as aids in planning and control. (10 marks)

[Total: 25 Marks]

QUESTION THREE

Maximo Company has been in business producing a limited range of products. The company has been using traditional manufacturing philosophies. The Managing Director of the company has recently come from a workshop where the presenter had emphasized the need for companies to get accustomed to the modern manufacturing philosophies if they are to remain competitive and relevant in the modern business environment.

In view of the above, the managing director has requested you to prepare a report that addresses some of the aspects of the modern manufacturing environment.

Required:
(a) Explain three (3) roles of a management accountant (6 marks)
(b) Explain three (3) key concepts of Kaizen costing (3 marks)
(c) Prepare a report that:
   (i) Explains three (3) key principles of the Theory of constraints. (6 marks)
   (ii) Explains Goldratt’s five (5) steps of dealing with bottleneck activities.
QUESTION FOUR

Maanu Limited intends to commence production of a new product. The selling price will be K15 per unit and the company wishes to achieve a mark-up of 50%. The company has since engaged a firm of management consultants on the product’s potential sales and costs over its’ six years life span.

The report from the firm of management consultants is as follows:

(i) Sales demand

<table>
<thead>
<tr>
<th>Years</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales (units)</td>
<td>1,000</td>
<td>3,000</td>
<td>5,000</td>
<td>7,000</td>
<td>8,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>

(ii) Design and development cost K40,000

(iii) Production cost per unit

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director material</td>
<td>3.00</td>
</tr>
<tr>
<td>Direct labour</td>
<td>2.50</td>
</tr>
<tr>
<td>Variable production overhead</td>
<td>1.50</td>
</tr>
</tbody>
</table>

(iv) Fixed production cost per year K4,000

(v) End of life cost K10,000

Required:

(a) (i) State the stages involved in target costing (4 marks)

(ii) Explain the importance of lifecycle costing to Maanu Limited (6 marks)

(b) Calculate to the nearest Kwacha the:

(i) Target cost per unit in year 1 and comment as to whether or not there is a cost gap. (4 marks)

(ii) Lifecycle cost per unit and comment as to whether or not there is a cost gap. (7 marks)

(c) Outline measures a company can take to reduce or close up the cost gap. (4 marks)

[Total: 25 Marks]
QUESTION FIVE

Keep-Fit Limited specializes in the manufacture of sportswear. Sales in the current year have been K5.2 million. The terms of sale are 2% discount for payments within 14 days. All sales are on 28 days credit, although customers not taking the discount usually take 56 days to pay on average. Accounts receivable currently amounts to K500,000, included in which are the 50% of the company’s customers who take advantage of the cash discount. 1% of credit sales become bad debts. The net operating margin excluding bad debts all discounts for Keep-Fit Limited is 25% of sales.

The Company is considering a change in its credit policy to 4% discount within 14 days, net 56 days. It anticipates the following effects of this change:

- Sales to increase by 10% annually
- 75% of customers to take advantage of the discount
- Bad debts to fall to 0.5% of sales
- Period of time before payment for customers not taking the discount to increase by one week.

Keep-Fit Limited’s cost of finance is 12% and work a 52 week year.

Required:

(a) Calculate and explain the effect of the proposed changes in credit policy on:

   (i) Net operating profit
   (ii) Accounts receivable
   (iii) Discount allowed
   (iv) Bad debts
   (v) Profitability of Keep-Fit Limited

(12 marks)

(b) Outline policies that may produce savings in other items of working capital other than receivables.

(5 marks)

(c) Explain the services that may be provided by factoring organizations.

(8 marks)

[Total: 25 Marks]

END OF PAPER
DA 9 MANAGEMENT ACCOUNTING SOLUTIONS

SOLUTION ONE

(a) 

(i) **Sales price variance**

Variance = (Actual price – Std price) x actual sales units;

T (K2,112 – K2,240) x 600 = K76,800 A

L (K1,856 – K1,920) x 520 = K33,280 A

Total variance = K110,080 A

Sales volume contribution variance

Variance = (Budgeted sales – Actual sales) x Std contribution

T (472 units – 600 units) x K1,216 = K155,648 F

L (472 units – 520 units) x K1,152 = K55,296 F

Total variance = K210,944 F

(ii) **Material price planning variance**

Variance = (Revised price – Original price) x Actual units

(K544 per unit – K384 per unit) x 1,120 units = K179,200 A

**Material price operational variance**

Variance = (Actual price – Revised price) x actual units

(K512 per unit – K544 per unit) x 1,120 units = K35,840 F

(iii) **Labour rate variance**

Variance = (Std rate – actual rate) x actuals hours

(K89.6 – K115.2) x 440 hours = K11,264 A

**Labour efficiency**

Variance = (std hours – actual hrs) x std rate

(220 hrs – 440 hrs) x K89.6 = K19,712 A

Working

Actual hours worked by temporary workers:

Total hours required if staff are fully efficient = (520 x 1.2) + (600 x 1.6) = 1,584 hrs

Total capacity of permanent workforce is 1,364 hours, therefore excess = 1,584 – 1,364 = 220

Temporary workers take twice as long, therefore ignore permanent staff in the calculation. Total time taken would be 440 hrs
(b) **Material price variance**

The adverse material price variance could arise due to a number of controllable and uncontrollable factors. For this reason, it is important to analyze the variance in further detail to provide a true and fair assessment of the efficiency of the purchasing department.

Splitting the total variance into planning and operational components will enable CA Ltd to distinguish between variances that have arisen due to inaccurate planning and faulty standards (planning variance) and those which have been caused by adverse or favourable operational performance (operational variances).

(c) **Material price planning variance**

Planning variances arise because the original standard and revised standards are different. It is unlikely that the purchasing department could do anything to alter the planning variance as it is not controlled by operational functions, but by senior management. The material price planning variance shows how skilled management are in estimating future prices.

**Material price operational variance**

The operational variance compares actual results with a realistic standard or budget. The material price operational variance measures the purchasing department’s efficiency given the market price at the time that materials were purchased.

The operational variance ignores factors that the purchasing department cannot control and is likely to gain greater acceptance as a performance measure as staff know that they will not be held responsible for poor planning and faulty standard setting.

**SOLUTION TWO**

(a) (i) **Production budget (Units)**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales units</td>
<td>845</td>
<td>1,235</td>
</tr>
<tr>
<td>Closing inventory (W1)</td>
<td>78</td>
<td>266</td>
</tr>
<tr>
<td>Opening inventory</td>
<td>(163)</td>
<td>(361)</td>
</tr>
<tr>
<td>Good production units</td>
<td>760</td>
<td>1,140</td>
</tr>
<tr>
<td>Defective units adjustment (x5/95)</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Total production units</td>
<td>800</td>
<td>1,200</td>
</tr>
</tbody>
</table>

(ii) **Raw material purchases budget**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>Total (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production units</td>
<td>800</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>X Raw material per unit</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Raw material usage</td>
<td>5,600</td>
<td>9,600</td>
<td>15,200</td>
</tr>
<tr>
<td>Closing inventory (W2)</td>
<td>1,120</td>
<td>1,920</td>
<td>3,040</td>
</tr>
<tr>
<td>Opening inventory</td>
<td>(2,240)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raw material purchases</td>
<td></td>
<td>16,000</td>
<td></td>
</tr>
<tr>
<td>X cost of material per Kg</td>
<td>K36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of raw material purchases</td>
<td>K576,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(iii) **Production labour budget**

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>Total (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production units</td>
<td>800</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>X labour hours per unit</td>
<td>8</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Standard labour hours</td>
<td>6,400</td>
<td>6,000</td>
<td>12,400</td>
</tr>
<tr>
<td>Productivity adjustment (x20/80)</td>
<td>1,600</td>
<td>1,500</td>
<td>3,100</td>
</tr>
<tr>
<td>Total labour hours required</td>
<td>15,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total labour hours available (W3)</td>
<td>12,480</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overtime hours</td>
<td></td>
<td>3,020</td>
<td></td>
</tr>
</tbody>
</table>

**Production labour Cost**

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic pay (15,500 hours x K24)</td>
<td>372,000</td>
</tr>
<tr>
<td>Overtime premium (3,020 hours x K6)</td>
<td>18,120</td>
</tr>
<tr>
<td>Cost of production labour</td>
<td>390,120</td>
</tr>
</tbody>
</table>

**Workings**

(1) Closing inventory of finished units:

Total days’ sales units (13 weeks x 5 days/week) = 65 days

Product A: \((\frac{6}{65} \times 845\) units\) = 78 units

Product B: \((\frac{14}{65} \times 1,235\) units\) = 266 units

(2) Closing inventory of raw materials:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 days’ production units</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>X material usage per unit</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>13 days material usage</td>
<td>1,120</td>
<td>1,920</td>
</tr>
</tbody>
</table>

(3) Total basic hours (24 employees x 40 hours for 13 weeks) = 12,480 hours

(b) (i) Budgetary control is the method by which management of a company’s operations controlled by means of comparing actual results to budgets or forecasts

The following are some of the advantages of an effective budgetary control:

It will alert management at Kumawa Limited to situations where expectations are not being met thereby allowing them to take remedial action on a timely basis. E.g. lower sales units than expected will enable management investigate the cause; for example, price reductions by a competitor and adjust their policies accordingly.
It will allow management at Kumawa Limited plan for future requirements within the business. This may require increasing or reducing capacity, labour, inventory in line with expected market for the company’s products.

Other than providing lenders to Kumawa Limited with forecast information which they can use as a basis for lending decisions, an effective budgetary control system will demonstrate to management that they are controlling or not controlling the business.

(ii) **Rolling Budgets**

A rolling budget is a budget continuously updated by adding a further period, such as a quarter or months and deducting the earliest period. At the end of each month or quarter, actual results are compared with budgeted results prompting amendments to the budget for the remaining months/quarters should there be a large divergence between the two and a budget for an additional month/quarter is prepared.

This provides a more realistic plan than a fixed annual budget prepared many months ago leading to improved planning and control since budgets are kept up to date in the light of current events and expectations. A more realistic plan is achievable.

Rolling budgets will provide a more appropriate yardstick for control purposes to management at Kumawa Limited and comparison of actual results against a realistic and achievable target provides more relevant feedback and allow for better feed forward control.

**Flexible Budgets**

They show expected results at various levels of activity since they recognize different cost behavior patterns.

A flexible budget reduce the effects of any certainty at planning stage by preparing contingency flexible budgets at various volumes. It highlights the impact of step costs on planned profits and enables management to make decisions about overtime/subcontracting work if sales volume exceeds plan or know what to do with spare capacity if sales volume is less than the plan.

In retrospect, flexible budgets can be used to compare actual results achieved with what would have been expected if the actual circumstances had been known in advance. They act as a yardstick against which actual performance can be measured thereby providing management needs to be informed about how good or bad actual performance has been.

Comparing actual results with a budget for a different level of output since business dynamics is meaningless. Actual results at the actual level of activity achieved should be compared with the results that should have been expected at this level of activity, which are shown by the flexible budget.
SOLUTION THREE

Part a)

The roles of a Management accountant are mainly concerned with providing information to assist the organisation in the following.

- **Establishing inventory valuations, profits and statement of financial position** items
- **Planning** (for example the provision of forecast costs at different activity levels, preparation of budgets)
- **Control** (such as the provision of actual and standard costs for comparison purposes and variance reporting)
- **Decision making** (for example, the provision of information about actual unit costs for the period just ended for pricing decisions).

Other possible roles include; **Organization, Communication and motivation**

Part b)

Kaizen costing focuses on obtaining small incremental cost reductions during the production stage of the product life cycle. It is a Japanese phrase that 'translates as continuous improvement.

In summary, functional target costs are added together and the total becomes the product target cost. Once the product has been in production for say a year, the actual cost for the first year becomes the starting point for further cost reductions. It is this process of continuous improvement, encouraging constant reductions by tightening standards that is called Kaizen costing.

Kaizen therefore focuses on;
(a) Reduction of non-value added activities and costs
(b) Elimination of waste
(c) Improvements in production cycle time
Part c) REPORT

TO: Managing Director
FROM: Accountant
DATE: 16th June 2018
SUBJECT: Modern manufacturing philosophies

Introduction
The following reporting has been prepared in view of the changes in the modern business environment, to which as a business, we must be accustomed for us to remain competitive and thus relevant.
This report covers the areas of Theory of constraints, dealing with constraints and finally a conclusion.

Theory of constraints
Theory of Constraints (TOC) is a set of concepts developed in the United States of America which aim to identify the binding constraints in a production system and which strive for evenness of production flow so that the organisation works as effectively as possible. No inventories should be held, except prior to the binding constraint. In this regard the key concepts of TOC include;

Maximisation of throughput
The term “throughput” relates to the rate of conversion of raw materials into sales of finished product, therefore the aim would be to get as much throughput as possible from the available resources.

Optimisation of the bottleneck
The flow of production will be limited by one resource that has lower capacity than others. The company will focus on the bottleneck with little attention to other resources, taking steps to increase capacity in the bottleneck and work to avoid any downtime in the bottleneck resource.

Minimisation of inventory
Since holding inventory rarely adds value to an end product, Throughput Accounting gives no value to inventory of raw materials, work-in-progress or finished goods.

Dealing with the bottleneck
In order to manage constraints effectively, Goldratt has proposed a five-step process of ongoing improvement. The process operated as a continuous loop.

Identify the binding constraint/bottleneck.
Management of Maximo need to undertake a review of the production processes to ascertain the current capacity and that required capacity to satisfy demand. The purpose is to identify the constraint on the company’s activities.

Exploit
Once the bottleneck has been identified, the highest possible output must be determined and achieved from the binding constraint. This output must never be delayed and as such a buffer inventory should be held immediately before the constraint.
Operations prior to the binding constraint should operate at the same speed as it so that WIP does not build up. The subordination of other operations (that is to ensure that other operations work at the pace of the bottleneck process) avoids the build-up of stocks which is non value adding.

Elevate the system bottleneck
Steps should be taken to increase resources or improve the efficiency of the bottleneck were possible. In the event that this cannot be done, management must aim to optimise the bottleneck resource.

Review and Return to step one
The removal of one bottleneck may create another elsewhere in the system, therefore management must start the process again.

Conclusion
Indeed the business environment has changed and as Maximo we must change from our traditional manufacturing philosophies and adapt to modern philosophies.
I hope this addresses your concerns.

Signed: Management Accountant

SOLUTION FOUR

(a)  (i) Stages in target costing:

1. Determine its target price which customers will be prepared to pay for the product.

2. Deduct a target profit margin from the target price to determine the target cost.

3. Estimate the actual cost of the product.

4. If estimated actual cost exceeds the target cost, investigate ways of driving down the actual cost to the target cost.

(ii) Lifecycle costing estimates and accumulative costs over a product’s entire lifecycle.

The lifecycle costs are the costs incurred on products and services from their design stage through development to market launch, production and sales and their eventual withdrawal from the market.

Knowledge of the lifecycle costs for the product will help management at Maanu Limited determine whether or not profits made during the manufacturing phase will cover the costs incurred during the pre and post manufacturing stages.

Identifying the costs incurred during the different stages of the product’s lifecycle will provide management an insight into understanding and managing the total costs incurred throughout its lifecycle.
Management will be able to identify areas in which cost reduction efforts are likely to be most effective since lifecycle costing allows them to understand the consequences of developing and making the product.

(b) (i) Target cost per unit

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target selling price</td>
<td>15</td>
</tr>
<tr>
<td>Profit margin ($50 \times K15)</td>
<td>(5)</td>
</tr>
<tr>
<td>Target cost</td>
<td>10</td>
</tr>
</tbody>
</table>

Actual cost per unit

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct material</td>
<td>3.00</td>
</tr>
<tr>
<td>Direct labour</td>
<td>2.50</td>
</tr>
<tr>
<td>Variable production cost</td>
<td>1.50</td>
</tr>
<tr>
<td>Fixed production cost (K4,000)</td>
<td>4.00</td>
</tr>
</tbody>
</table>

There is a target cost gap as follows:

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual cost per unit</td>
<td>11</td>
</tr>
<tr>
<td>Target cost</td>
<td>10</td>
</tr>
<tr>
<td>Cost Gap</td>
<td>1</td>
</tr>
</tbody>
</table>

(ii) Lifecycle cost per unit

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,000</td>
<td>3,000</td>
<td>5,000</td>
<td>7,000</td>
<td>8,000</td>
<td>4,000</td>
<td>28,000</td>
<td></td>
</tr>
<tr>
<td>Lifecycle Costs:</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
<td>K'000</td>
</tr>
<tr>
<td>D. Material</td>
<td>3</td>
<td>9</td>
<td>15</td>
<td>21</td>
<td>24</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Labour</td>
<td>2.5</td>
<td>7.5</td>
<td>12.5</td>
<td>17.5</td>
<td>20</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable Production Overhead</td>
<td>1.5</td>
<td>4.5</td>
<td>7.5</td>
<td>10.5</td>
<td>18</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Production Cost</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and Development Cost</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of Life Cost</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total Lifecycle Cost</td>
<td>40</td>
<td>11</td>
<td>25</td>
<td>39</td>
<td>53</td>
<td>60</td>
<td>42</td>
<td>270</td>
</tr>
</tbody>
</table>

Lifecycle cost per unit = \( \frac{K270,000}{28,000 \text{ units}} \)

= 9.64

= K10

There is no cost gap since actual cost per unit is equal to the lifecycle cost per unit.
(c) Possible options to reduce or close the cost gap

- Training staff in more efficient techniques
- Using cheaper staff
- Acquiring new, more efficient technology
- Cutting out non-value added activities

SOLUTION FIVE

(a) The proposed changes in the credit policy for Keep-Fit Limited will affect;

- Net operating profit
- Accounts receivable
- Discount allowed
- Bad debts
- Profitability of Keep-Fit Limited

Revised sales (K5.2M x 1.1) = K5.72M

(i) Net operating profit (@ 25% of sales)

| KM | Current level of sales (25% of K5.2M) | 1.3 |
| KM | After change in policy (25% of K5.72M) | 1.43 |
| KM | Change in net operating profit | 0.13 |

Net operating profit will increase by K130,000.

(ii) Accounts Receivable

| KM | Receivables period (Take discount) | 2 weeks |
| KM | Receivables period (not take discount) | 8 weeks |
| KM | Receivables mix: 50% take discount | 50% do not take discount |
| KM | Revised receivables mix : 25% take discount | 25% do not take discount |

| KM | Current: | 0.5 |
| KM | Revised: (75% x 5.72 x 2) + (25% x 5.72 x 9) | 0.4125 |
| KM | Revised: (52 x 52) + (52 x 52) | 0.0875 |

Receivables will reduce by K87,500

Savings on the reduction in receivables:

Savings (12% x 87,500) = K10,500
(iii) Discount allowed:

<table>
<thead>
<tr>
<th>Description</th>
<th>KM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current (K5.2M x 2% x 50%)</td>
<td>0.052</td>
</tr>
<tr>
<td>After change in policy (K5.72M x 4% x 75%)</td>
<td>0.1716</td>
</tr>
</tbody>
</table>

Discount allowed will increase by **K119,600**

(iv) Bad debts:

<table>
<thead>
<tr>
<th>Description</th>
<th>KM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current level (1% x K5.2M)</td>
<td>0.052</td>
</tr>
<tr>
<td>After change in policy (0.5% x K5.72M)</td>
<td>0.0286</td>
</tr>
</tbody>
</table>

Bad debts will reduce by **K 23,400**

(v) Profitability of Keep-Fit Limited

<table>
<thead>
<tr>
<th>Description</th>
<th>Saving</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net operating profit</td>
<td>130,000</td>
<td></td>
</tr>
<tr>
<td>Receivables</td>
<td>10,500</td>
<td></td>
</tr>
<tr>
<td>Discount allowed</td>
<td>23,400</td>
<td>119,600</td>
</tr>
<tr>
<td>Bad debts</td>
<td>163,900</td>
<td>119,600</td>
</tr>
</tbody>
</table>

Net increase in profit **K44,300**

There will be an increase in Keep-Fit Limited’s profitability arising from the proposed change in credit policy.

(b) **Inventory control**

Improvements using computerized systems and techniques such as economic order quantity and just in time. Achieving faster inventory turnover can reduce costs of inventory holding.

**Cash control**

Use of cash flow forecasts can help identify surpluses and deficits of cash. Surpluses can be invested and short-term overdrafts arranged to cover deficits.

**Payables**

It may be possible to delay payments to trade payables but this can have adverse effects on relationships with suppliers and the company could incur interest payments on overdue accounts.

(c) A factor normally manages the debts owed to a client on the client’s behalf.
Services provided by factoring organizations

(i) Administration of the clients invoicing, sales accounting and debt collection service.

(ii) Credit protection for the clients debts, whereby the factor takes over the risk of loss from bad debts and so insures the client against such losses. The factor may purchase these debts without recourse to the client, which means that if the clients customers do not pay what they owe, the factor will not ask for the money back from the client.

(iii) Factor finance may be provided, the factor advancing cash to the client against outstanding debts. The factor may advance up to 85% of approved debts from the date of invoice.

(iv) A confidentiality agreement may be offered to conceal the existence of the arrangement from customers.

END OF SOLUTIONS
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:

   Section A: There are two (2) compulsory questions.
   Section B: There are three (3) questions. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
## Taxation table for paper DA10 – Taxation
### June and December 2018 Examinations

### Income Tax

#### Standard personal income tax rates

<table>
<thead>
<tr>
<th>Income band</th>
<th>Taxable amount</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1 to K39,600</td>
<td>first K39,600</td>
<td>0%</td>
</tr>
<tr>
<td>K39,601 to 49,200</td>
<td>next K9,600</td>
<td>25%</td>
</tr>
<tr>
<td>K49,201 to K74,400</td>
<td>next K25,200</td>
<td>30%</td>
</tr>
<tr>
<td>Over K74,400</td>
<td></td>
<td>37.5%</td>
</tr>
</tbody>
</table>

#### Income from farming for individuals

<table>
<thead>
<tr>
<th>Income band</th>
<th>Taxable amount</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1 to K39,600</td>
<td>first K39,600</td>
<td>0%</td>
</tr>
<tr>
<td>Over K39,600</td>
<td></td>
<td>10%</td>
</tr>
</tbody>
</table>

### Company Income Tax rates

- On income from manufacturing and other: 35%
- On income from farming: 10%
- On income of Banks and other Financial Institutions: 35%
- On income from mineral processing: 30%
- On income from mining operations: 30%

### Capital Allowances

#### Implements, plant and machinery and commercial vehicles:

- Wear and Tear Allowance –
  - Plant used normally: 25%
  - Used in Manufacturing and Leasing: 50%
  - Used in farming and agro-processing: 100%

#### Non-commercial vehicles

- Wear and Tear Allowance: 20%

#### Industrial Buildings:

- Wear and Tear Allowance: 5%
- Initial Allowance: 10%
- Investment Allowance: 10%

#### Low Cost Housing  
(Cost up to K20,000)

- Wear and Tear Allowance: 10%
- Initial Allowance: 10%
**Commercial Buildings**

Wear and Tear Allowance 2%

**Farming Allowances**

Development Allowance 10%
Farm Works Allowance 100%
Farm Improvement Allowance 100%

**Presumptive Taxes**

**Turnover Tax**

<table>
<thead>
<tr>
<th>Monthly turnover</th>
<th>Turnover Tax per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1 to K4,200</td>
<td>3% of monthly turnover above K3,000</td>
</tr>
<tr>
<td>K4,200.01 to K8,300</td>
<td>K225 per month+3% of monthly turnover above K4,200</td>
</tr>
<tr>
<td>K8,300.01 to K12,500</td>
<td>K400 per month+3% of monthly turnover above K8,300</td>
</tr>
<tr>
<td>K12,500.01 to K16,500</td>
<td>K575 per month+3% of monthly turnover above K12,500</td>
</tr>
<tr>
<td>K16,500.01 to K20,800</td>
<td>K800 per month+3% of monthly turnover above K16,500</td>
</tr>
<tr>
<td>Above K20,800</td>
<td>K1,025 per month+3% monthly of turnover above K20,800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual turnover</th>
<th>Turnover Tax per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1 to K50,400</td>
<td>3% of annual turnover above K36,000</td>
</tr>
<tr>
<td>K50,400.01 to K99,600</td>
<td>K2,700 per annum+3% of annual turnover above K50,400</td>
</tr>
<tr>
<td>K99,600.01 to K150,000</td>
<td>K4,800 per annum +3% of annual turnover above K99,600</td>
</tr>
<tr>
<td>K150,000.01 to K198,000</td>
<td>K6,900 per annum+3% of annual turnover above K150,000</td>
</tr>
<tr>
<td>K198,000.01 to K249,600</td>
<td>K9,600 per annum+3% of annual turnover above K198,000</td>
</tr>
<tr>
<td>Above K249,600</td>
<td>K12,300 per annum +3% of annual of turnover above K249,600</td>
</tr>
</tbody>
</table>

**Presumptive Tax for Transporters**

<table>
<thead>
<tr>
<th>Seating capacity</th>
<th>Tax per annum</th>
<th>Tax per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 64 passengers and over</td>
<td>10,800</td>
<td>29.60</td>
</tr>
<tr>
<td>From 50 to 63 passengers</td>
<td>9,000</td>
<td>24.70</td>
</tr>
<tr>
<td>From 36 to 49 passengers</td>
<td>7,200</td>
<td>19.70</td>
</tr>
<tr>
<td>From 22 to 35 passengers</td>
<td>5,400</td>
<td>14.80</td>
</tr>
<tr>
<td>From 18 to 21 passengers</td>
<td>3,600</td>
<td>10.00</td>
</tr>
<tr>
<td>From 12 to 17 passengers</td>
<td>1,800</td>
<td>5.00</td>
</tr>
<tr>
<td>Less than 12 passengers and taxis</td>
<td>900</td>
<td>2.50</td>
</tr>
</tbody>
</table>

**Property Transfer Tax**

Rate of Tax on Realised Value of Land, Land and Buildings and shares 5%
Rate of Tax on Realised Value on a transfer or sale of a mining right 10%
Rate of Tax on Realised Value on a transfer of Intellectual Property 5%

**Value Added Tax**

- Registration threshold K800,000
- Standard Value Added Tax Rate (on VAT exclusive turnover) 16%

**Customs and Excise**

**Customs and Excise duties on used motor vehicles**

<table>
<thead>
<tr>
<th>Motor vehicles for the transport of ten or more persons, including the driver</th>
<th>Aged 2 to 5 years</th>
<th>Aged over 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customs duty</td>
<td>Excise duty</td>
</tr>
<tr>
<td>Sitting capacity of 10 but not exceeding 14 persons including the driver</td>
<td>17,778</td>
<td>22,223</td>
</tr>
<tr>
<td>Sitting capacity exceeding 14 but not exceeding 32 persons</td>
<td>38,924</td>
<td>0</td>
</tr>
<tr>
<td>Sitting capacity of 33 but not exceeding 44 persons</td>
<td>86,497</td>
<td>0</td>
</tr>
<tr>
<td>Sitting capacity exceeding 44 persons</td>
<td>108,121</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motor cars and other motor vehicles principally designed for the transport of persons including station wagons and racing cars</th>
<th>Aged 2 to 5 years</th>
<th>Aged over 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customs duty</td>
<td>Excise duty</td>
</tr>
<tr>
<td><strong>Sedans</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity not exceeding 1000 cc</td>
<td>12,490</td>
<td>10,824</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc</td>
<td>16,058</td>
<td>13,917</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc</td>
<td>16,545</td>
<td>21,508</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc</td>
<td>18,049</td>
<td>23,463</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 3000 cc</td>
<td>22,561</td>
<td>29,329</td>
</tr>
<tr>
<td><strong>Hatchbacks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity not exceeding 1000 cc</td>
<td>10,705</td>
<td>9,278</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 1000 cc but not exceeding 1500 cc</td>
<td>14,274</td>
<td>12,371</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 1500 cc but not exceeding 2500 cc</td>
<td>15,041</td>
<td>19,553</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc</td>
<td>16,545</td>
<td>21,508</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 3000 cc</td>
<td>19,553</td>
<td>25,419</td>
</tr>
<tr>
<td><strong>Station wagons</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity not exceeding 2500 cc</td>
<td>16,545</td>
<td>21,508</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc</td>
<td>18,049</td>
<td>23,463</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 3000 cc but not exceeding 2500 cc</td>
<td>22,561</td>
<td>29,329</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>SUVs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder capacity not exceeding 2500 cc</td>
<td>21,057</td>
<td>27,374</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 2500 cc but not exceeding 3000 cc</td>
<td>24,065</td>
<td>31,284</td>
</tr>
<tr>
<td>Cylinder capacity exceeding 3000 cc</td>
<td>28,577</td>
<td>37,150</td>
</tr>
<tr>
<td>Aged 2 to 5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aged over 5 years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Motor vehicles for the transport of goods – with compression-ignition internal combustion piston engine (diesel or semi-diesel):

<table>
<thead>
<tr>
<th></th>
<th>Customs duty</th>
<th>Excise duty</th>
<th>Customs duty</th>
<th>Excise duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single cab</td>
<td>K</td>
<td>K</td>
<td>K</td>
<td>K</td>
</tr>
<tr>
<td>GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes</td>
<td>21,926</td>
<td>9,501</td>
<td>8,770</td>
<td>3,801</td>
</tr>
<tr>
<td>GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes</td>
<td>26,311</td>
<td>11,402</td>
<td>15,348</td>
<td>6,651</td>
</tr>
<tr>
<td>GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes</td>
<td>30,697</td>
<td>13,302</td>
<td>17,541</td>
<td>7,601</td>
</tr>
<tr>
<td>Double cabs GVW exceeding 3 tonnes but not exceeding 5 tonnes</td>
<td>30,274</td>
<td>0</td>
<td>24,119</td>
<td>10,452</td>
</tr>
<tr>
<td>Double cabs GVW exceeding 3 tonnes but not exceeding 5.0 tonnes, with spark ignition internal combustion piston engine</td>
<td>30,697</td>
<td>13,302</td>
<td>24,119</td>
<td>10,452</td>
</tr>
<tr>
<td>Panel Vans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GVW exceeding 1.0 tonne but not exceeding 1.5 tonnes</td>
<td>15,348</td>
<td>6,651</td>
<td>8,770</td>
<td>3,801</td>
</tr>
<tr>
<td>GVW exceeding 1.5 tonnes but not exceeding 3.0 tonnes</td>
<td>17,541</td>
<td>7,601</td>
<td>15,348</td>
<td>6,651</td>
</tr>
<tr>
<td>GVW exceeding 3.0 tonnes but not exceeding 5.0 tonnes</td>
<td>21,926</td>
<td>9,501</td>
<td>17,541</td>
<td>7,601</td>
</tr>
<tr>
<td>Trucks</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GVW up to 2 tonnes</td>
<td>21,926</td>
<td>9,501</td>
<td>10,963</td>
<td>4,751</td>
</tr>
<tr>
<td>GVW exceeding 2.0 tonnes but not exceeding 5.0 tonnes</td>
<td>28,504</td>
<td>12,352</td>
<td>13,156</td>
<td>5,701</td>
</tr>
<tr>
<td>GVW exceeding 5.0 tonnes but not exceeding 10.0 tonnes</td>
<td>24,724</td>
<td>18,955</td>
<td>10,817</td>
<td>8,293</td>
</tr>
<tr>
<td>GVW exceeding 10.0 tonnes but not exceeding 20.0 tonnes</td>
<td>30,905</td>
<td>23,694</td>
<td>11,744</td>
<td>9,004</td>
</tr>
<tr>
<td>GVW exceeding 20 tonnes</td>
<td>51,898</td>
<td>0</td>
<td>19,461</td>
<td>0</td>
</tr>
<tr>
<td>GVW exceeding 20 tonnes, with spark ignition internal combustion piston engine</td>
<td>37,086</td>
<td>28,432</td>
<td>13,907</td>
<td>10,662</td>
</tr>
</tbody>
</table>
Customs and excise duty on new vehicles

1. Motor cars and other motor vehicles (including station wagons) principally designed for the transport of less than ten persons, including the driver:
   - Customs duty: 30%
   - Excise duty:
     - Cylinder capacity of 1500 cc and less: 20%
     - Cylinder capacity of more than 1500 cc: 30%

2. Pick-ups and trucks/lorries with gross weight not exceeding 20 tonnes:
   - Customs duty: 15%
   - Excise duty: 10%

3. Buses/coaches for the transport of more than ten persons
   - Customs duty: 15%
   - Excise duty:
     - Seating capacity of 16 persons and less: 25%
     - Seating capacity of 16 persons and more: 0%

4. Trucks/lorries with gross weight exceeding 20 tonnes
   - Customs duty: 15%
   - Excise duty: 0%

5. The minimum amount of customs duty on motor vehicles is K6,000.

6. Import VAT is added to the sum of VDP, customs duty and excise duty. It is determined at the standard rate of 16%
SECTION A – TWO COMPULSORY QUESTIONS

Attempt both questions in this section

QUESTION ONE

Purefruit, a Zambian resident company, produces pure juice from a variety of fruits supplied by its own extensive agricultural operations. The company listed its shares on the Lusaka Stock Exchange (LuSE) in 2016 when 25% of its issued shares were taken up by indigenous Zambians. For the purposes of income taxes, Purefruit is classified as a company engaged in farming.

The company made a net profit before tax as per statement of profit or loss amounting to K251,700 for the year ended 31 December 2018. This profit figure was arrived at after the following:

Other Income

1. Profit on sale of a piece of farm land amounting to K40,000. The farm land was acquired three (3) years ago at a cost of K200,000. The sale proceeds were K240,000 while the open market value was K260,000.

2. Investment income amounting to K80,000 includes royalties amounting to K60,000 (gross) and rental income amounting to K20,000 (gross). Withholding tax has already been deducted at source in each case.

Expenses

1. Depreciation of non-current assets amounting to K106,700 and impairment losses arising from intangible assets of K41,500.

2. Irrecoverable debts expenses of K230,000 includes trade debts written off K170,000, increase in general provision K85,000, increase in specific provision of K40,000, trade debts previously written off now recovered K50,000 and loans to former employees previously written off now recovered K15,000.

3. Wages & salaries of K882,600 includes directors’ emoluments amounting to K308,400. These directors are accommodated in company owned houses.

4. Professional and legal fees of K370,000 includes K80,000 for collection of trade debts, K130,000 for accountancy and audit services, K52,000 for recovery of loans from former employees, K38,000 penalty for late payment of balance of income tax for the tax year 2017 and K70,000 for defending title to company’s farm land.

5. Entertainment expenses of K180,000 includes K61,000 incurred in entertaining suppliers, K48,000 in entertaining customers and the balance incurred in entertaining employees.

6. General expenses of K1,786,800 includes distribution expenses K790,700, administration expenses K581,000, canteen expenses incurred in providing meals to members of staff K241,000 and gifts of calendars bearing the company’s name each costing K97 amounting to K174,100.
Other information

1. On 1 January 2018, the company had the following implements, plant & machinery:

<table>
<thead>
<tr>
<th></th>
<th>Income tax value</th>
<th>Original cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota prado car (3200cc)</td>
<td>120,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Office equipment</td>
<td>18,750</td>
<td>75,000</td>
</tr>
<tr>
<td>Processing equipment</td>
<td>85,000</td>
<td>170,000</td>
</tr>
</tbody>
</table>

The Toyota prado car is used by the managing director on personal-to-holder basis. The private use in the car has been agreed with the Commissioner General to be 60%. The company incurred the following capital expenditure during the tax year 2018:

<table>
<thead>
<tr>
<th></th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation equipment</td>
<td>60,000</td>
</tr>
<tr>
<td>Combine harvester</td>
<td>50,000</td>
</tr>
<tr>
<td>Fuso truck</td>
<td>120,000</td>
</tr>
<tr>
<td>Dwelling houses for farm employees each costing K30,000</td>
<td>120,000</td>
</tr>
<tr>
<td>Clearing and stumping</td>
<td>22,000</td>
</tr>
<tr>
<td>Fencing</td>
<td>30,000</td>
</tr>
</tbody>
</table>

2. Provisional income tax paid by the company for the tax year 2018 amounted to K59,137.

Required:

(a) Calculate the property transfer tax paid by the company on the sale of the farm land in note 1 (i) above (2 marks)

(b) Calculate the maximum capital allowances claimable by the company for the tax tear 2018 (9 marks)

(c) Calculate the adjusted farming profit of the company for the tax year 2018 (9 marks)

(d) Calculate the income tax payable by the company for the tax year 2018 (5 marks)

[Total: 25 Marks]
QUESTION TWO

Vinnie Katebe, who is married to Precious Mwanza, is an employee of LP fisheries Ltd. Mr. Katebe was employed on 1 April 2018 as marketing manager at an annual basic salary of K241,000. Other conditions of service provided for the following:

- Housing allowance per annum: K60,250
- Transport allowance per annum: K24,100
- School children’s allowance per child per annum: K2,000

Mr. Katebe has two (2) school going children. On 1 May 2018, he received a labour day award as the most hardworking employee comprising cash of K5,800 and an upright fridge valued at K14,700. On 1 October 2018, LP fisheries Ltd declared a bonus for the employees for meeting the performance target for the third quarter of 2018. Mr. Katebe’s bonus amounted to K12,000.

In addition to his employment income, Mr. Katebe received bank deposit interest K5,960 (gross) and royalties K29,750 (net). Withholding tax had been deducted at source where appropriate.

During the tax year 2018, Mr. Katebe paid his children’s school fees amounting to K5,700, subscription to the institute of marketing amounting to K2,010, donation to local approved public benefit organisation amounting to K1,700 and income tax deducted under pay as you earn amounting to K70,252. Mr. Katebe contributed NAPSA at 5% of his basic salary.

Mrs. Precious Mwanza Katebe has been in business for many years as a retailer preparing her accounts annually to 31 December each year. The net profit as per statement of profit or loss for the year ended 31 December 2018 amounted to K213,250. This profit was from a turnover of K817,900. The net profit figure was arrived at after deducting the following expenses:

1. Depreciation of non-current assets amounting to K11,750
2. Motor vehicle expenses amounting to K15,000. The motor vehicle expenses were incurred in respect of Mrs. Katebe’s privately owned Motor van which is used for both business and private purposes. It has been agreed with the Commissioner General that the business use of the motor van is 40%.
3. General expenses amounting to K157,000 includes K32,000 for repairs to a newly acquired non-current assets in order to put them in a usable state, increase in general provision for irrecoverable debts amounting to K17,000. The balance constitutes revenue expenses which are allowable for tax purposes.
4. Salaries and wages amounting to K74,000 includes the nominal salary for Mrs. Katebe of K28,600; and her niece’s salary amounting to K25,000. Other employees on the same position as her niece are paid a salary of K18,000 each. The balance of the salaries and wages are all employees’ salaries.

**Other information**

Capital allowances on qualifying assets, including the motor van in note (2) above, have been agreed at K62,100.
Required:

(a) Calculate the income tax payable by Mr. Katebe for the tax year 2018.  
   (11 marks)

(b) Calculate the income tax payable by Mrs. Katebe for the tax year 2018.  
   (8 marks)

(c) Explain the following distinguishing factors between an employee and a self-employed person for taxation purposes:

(i) Work performance
(ii) Engagement and dismissal
(iii) Tools and equipment
(iv) Control
(v) Correction of work
(vi) Exclusivity

(6 marks)

[Total: 25 Marks]
SECTION B

There are THREE (3) questions in this section. Attempt any two (2) questions.

QUESTION THREE

(a) Value added tax is a tax on the turnover of taxable supplies of goods and services made in Zambia by a taxable person in the course of any business carried on by a VAT registered trader.

Required:

(i) Explain how the basic tax point is determined and the circumstances under which the basic tax point can be changed. (4 marks)

(ii) Explain any four (4) circumstances under which a registered trader may be deregistered for value added tax purposes. (4 marks)

(iii) Explain any three (3) advantages, for the trader, of registering for value added tax voluntarily. (3 marks)

(b) Mathews, a supplier of second hand electronic goods, is registered for value added tax. During the month of October 2018, he made sales revenue amounting to K113,600. Included in this figure are exempt supplies amounting to 15% of the total sales revenue. The remainder are all standard-rated supplies. The following are the purchases and expenses incurred during the month:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>K68,160</td>
</tr>
<tr>
<td>Overheads (inclusive of VAT)</td>
<td>K12,992</td>
</tr>
<tr>
<td>Entertainment expenses (Inclusive of VAT)</td>
<td>K 2,668</td>
</tr>
<tr>
<td>Motor van (Inclusive of VAT)</td>
<td>K40,600</td>
</tr>
<tr>
<td>Diesel (inclusive of VAT)</td>
<td>K 5,800</td>
</tr>
</tbody>
</table>

15% of the purchases are exempt supplies. The remainder of the purchases are all standard-rated supplies.

Unless stated otherwise all the above figures are exclusive of VAT.

Required:

Compute the value added tax payable by Mathews for the month of October 2018. You should clearly show whether VAT is chargeable or claimable on each of the above items. (7 marks)

(c) Tax planning can be defined as the minimization or deferring of tax liabilities by utilizing various provisions of the tax legislation.

Required:

(i) Explain the difference between tax avoidance and tax evasion (4 marks)

(ii) Explain three (3) consequences of tax evasion on the economy (3 marks)

[Total: 25 Marks]
**QUESTION FOUR**

(a) The following information relates to two companies:

**Coffee Ltd**

Coffee Ltd is a company engaged in the growing of coffee. The company was incorporated in a country known as Kenland. The board of directors holds their meetings in Kenland. The company has a total of ten (10) branches out of which eight (8) branches are located in Zambia.

**Bream Ltd**

Bream Ltd is a fisheries company which was incorporated in Zambia. The company has six (6) branches out of which five (5) branches are located in a country known as Westriver while one branch and the head office are located in Zambia.

**Required:**

(i) Explain the circumstances under which a company can be regarded as a Zambian resident company. (2 marks)

(ii) Explain, giving reasons, whether each one of the above would be regarded as being resident in Zambia for taxation purposes. (4 marks)

(b) Explain any five (5) qualities of a good tax system (canons of taxation). (5 marks)

(c) Cathy imported a brand new 45 Seater Higer bus at a cost of $32,100. She paid shipping costs and insurance amounting to $4,500 and $5,600 respectively up to the port of Durban. Incidental costs incurred from Durban up to the point of entry into Zambia amounted to $1,200. The bus arrived at Chirundu border post on 31 January 2018. The exchange rate provided by the Bank of Zambia and approved by the Commissioner General was K9.35 per US$1. The exchange rate quoted by other bureau de change was K9.50 per US$1.

**Required:**

(i) Calculate the total import duties paid by Cathy on the importation of the Higer bus. (6 marks)

(ii) Explain four (4) conditions to be met for the customs officers to use transaction value method in valuing imported goods. (4 marks)

(iii) Explain the procedure to complete the customs clearance of a motor vehicle. (4 marks)

[Total: 25 Marks]
**QUESTION FIVE**

(a) AB Ltd commenced trading on 1 August 2017 and prepared the first accounts for the period from 1 August 2017 to 31 December 2018, and will prepare accounts annually thereafter. The company reported a tax adjusted business profit, before capital allowances of K295,800. The company had the following transactions in non-current assets:

1 August 2017: Bought a newly constructed office building costing K120,000
31 October 2017: Bought a motor car costing K30,000
1 January 2018: Bought office equipment K35,000
30 June 2018: Bought delivery van K40,000
3 September 2018: Bought general machinery K56,000

The motor car is used by the managing director and it has been agreed with the Commissioner General that private use in the motor car is 30%.

**Required:**

(i) Compute capital allowances and the final taxable business profits for the company for all the relevant tax years, explaining the basis of assessments.  

(13 marks)

(ii) Compute the income tax payable by the company for the tax year 2018.  

(2 marks)

(b) In arriving at a conclusion as to whether a trade exist or not, the Zambia Revenue Authority use badges of trade when there are a series of transactions.

**Required:**

Explain the following badges of trade:

(i) The subject matter of realization
(ii) The length of the period of ownership
(iii) The frequency of similar transactions
(iv) Circumstances giving rise to realization
(v) The tax payer’s intentions

(10 marks)

[Total: 25 Marks]
DA10: TAXATION SOLUTIONS

SOLUTION ONE

(a) The property transfer tax is charged at 5% on the realised value

\[ = \text{K260,000} \times 5\% \]

\[ = \text{K13,000} \]

(b) **Purefruit Plc.**

**Capital allowances for the tax year 2018**

<table>
<thead>
<tr>
<th>Implements, plant &amp; Machinery</th>
<th>Cost/ITV</th>
<th>Capital allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toyota prado car</td>
<td>K120,000</td>
<td>K40,000</td>
</tr>
<tr>
<td>W &amp; T @20% of 200,000</td>
<td>(K40,000)</td>
<td>40,000</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>K80,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Office equipment</th>
<th>ITV b/f</th>
<th>Cost/ITV</th>
<th>Capital allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITV b/f</td>
<td>K18,750</td>
<td>K18,750</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @25% of 75,000</td>
<td>(K18,750)</td>
<td>18,750</td>
<td></td>
</tr>
<tr>
<td>ITV c/f</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Processing plant</th>
<th>ITV b/f</th>
<th>Cost/ITV</th>
<th>Capital allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITV b/f</td>
<td>K85,000</td>
<td>K85,000</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @50% of 170,000</td>
<td>(K85,000)</td>
<td>85,000</td>
<td></td>
</tr>
<tr>
<td>ITV c/f</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Irrigation equipment</th>
<th>Cost</th>
<th>W &amp; T @100%</th>
<th>ITV c/f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>K60,000</td>
<td>(K60,000)</td>
<td>Nil</td>
</tr>
<tr>
<td>W &amp; T @100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITV c/f</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Combine harvester</th>
<th>Cost</th>
<th>W &amp; T @100%</th>
<th>ITV c/f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>K50,000</td>
<td>(K50,000)</td>
<td>Nil</td>
</tr>
<tr>
<td>W &amp; T @100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITV c/f</td>
<td>Nil</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fuso truck</th>
<th>Cost</th>
<th>W &amp; T @25%</th>
<th>ITV c/f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>K120,000</td>
<td>(K30,000)</td>
<td>30,000</td>
</tr>
<tr>
<td>W &amp; T @25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITV c/f</td>
<td>K90,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Farm Improvements**

- *Dwelling houses: (K30,000 is restricted to K20,000 per house)*
  - K20,000 x 4x 100% 80,000
  - Fencing: K30,000 x 100% 30,000

**Farmworks**

- Clearing & stumping: K22,000 x 100% 22,000
- Total capital allowances 415,750
(c) PurefruitsPlc  
**Adjusted farming profits for the tax year 2018**

<table>
<thead>
<tr>
<th>Description</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit before tax</td>
<td>251,700</td>
</tr>
<tr>
<td>Add:</td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>106,700</td>
</tr>
<tr>
<td>Impairment loss</td>
<td>41,500</td>
</tr>
<tr>
<td>Increase in general provision</td>
<td>85,000</td>
</tr>
<tr>
<td>Free residential accommodation</td>
<td></td>
</tr>
<tr>
<td>(K308,400 x 30%)</td>
<td>92,520</td>
</tr>
<tr>
<td>Recovery of loans from former employees</td>
<td>52,000</td>
</tr>
<tr>
<td>Penalty for late payment of tax</td>
<td>38,000</td>
</tr>
<tr>
<td>Entertaining suppliers</td>
<td>61,000</td>
</tr>
<tr>
<td>Entertaining customers</td>
<td>48,000</td>
</tr>
<tr>
<td>Canteen expenses</td>
<td>241,000</td>
</tr>
<tr>
<td>Personal-to-holder</td>
<td>40,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>805,720</td>
</tr>
<tr>
<td><strong>Less:</strong></td>
<td></td>
</tr>
<tr>
<td>Profit on sale of land</td>
<td>40,000</td>
</tr>
<tr>
<td>Royalties</td>
<td>60,000</td>
</tr>
<tr>
<td>Rental income</td>
<td>20,000</td>
</tr>
<tr>
<td>Loans to former employee recovered</td>
<td>15,000</td>
</tr>
<tr>
<td>Capital allowances (b)</td>
<td>415,750</td>
</tr>
<tr>
<td><strong>Adjusted farming profit</strong></td>
<td>506,670</td>
</tr>
</tbody>
</table>

(d) PurefruitPlc  
**Income tax payable for the tax year 2018**

<table>
<thead>
<tr>
<th>Description</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming profit</td>
<td>506,670</td>
</tr>
<tr>
<td>Non-farming income</td>
<td></td>
</tr>
<tr>
<td>Royalties</td>
<td>60,000</td>
</tr>
<tr>
<td><strong>Total taxable income</strong></td>
<td>566,670</td>
</tr>
<tr>
<td>Income tax</td>
<td></td>
</tr>
<tr>
<td>Farming income: K506,670 x 10%</td>
<td>50,667</td>
</tr>
<tr>
<td>Non-farming income: K60,000 x 35%</td>
<td>21,000</td>
</tr>
<tr>
<td><strong>Income tax liability</strong></td>
<td>71,667</td>
</tr>
<tr>
<td>Less:</td>
<td></td>
</tr>
<tr>
<td>Provisional income tax paid</td>
<td>(59,137)</td>
</tr>
<tr>
<td>WHT- royalties (K60,000 x 15%)</td>
<td>(9,000)</td>
</tr>
<tr>
<td><strong>Income tax payable</strong></td>
<td>3,530</td>
</tr>
</tbody>
</table>
## SOLUTION TWO

### (a) Mr Vinnie Katebe

**Income tax payable for the tax year 2018**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary: K241,000 x 9/12</td>
<td></td>
<td>180,750</td>
</tr>
<tr>
<td>Housing allowance: K60,250 x 9/12</td>
<td></td>
<td>45,188</td>
</tr>
<tr>
<td>Transport allowance : K24,100 x 9/12</td>
<td></td>
<td>18,075</td>
</tr>
<tr>
<td>School children’s allowance: K2,000 x 2 x 9/12</td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td>Bonus</td>
<td></td>
<td>12,000</td>
</tr>
<tr>
<td>Royalties: K29,750 x 100/85</td>
<td></td>
<td>35,000</td>
</tr>
</tbody>
</table>

Less:

- Subscription to institute of marketing                        | 2,010   |
- Donation to public benefit organization                        | 1,700   |

**Taxable income**

<table>
<thead>
<tr>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>290,303</td>
</tr>
</tbody>
</table>

**Computation**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>First K39,600 @0%</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Next K9,600 @25%</td>
<td></td>
<td>2,400</td>
</tr>
<tr>
<td>Next K25,200 @30%</td>
<td></td>
<td>7,560</td>
</tr>
<tr>
<td>Balance K215,903 @37.5%</td>
<td></td>
<td>80,964</td>
</tr>
<tr>
<td>Income tax liability</td>
<td></td>
<td>90,924</td>
</tr>
</tbody>
</table>

Less:

- PAYE                     |         | (70,252) |
- WHT-royalties (35,000 x 15%) |         | (5,250)  |

**Income tax payable**

<table>
<thead>
<tr>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15,422</td>
</tr>
</tbody>
</table>

### (b) Mrs. Precious Mwanza Katebe

**Income tax payable for the tax year 2018**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit as per accounts</td>
<td></td>
<td>213,250</td>
</tr>
<tr>
<td>Add:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td></td>
<td>11,750</td>
</tr>
<tr>
<td>Motor expenses: 15,000 x 60%</td>
<td></td>
<td>9,000</td>
</tr>
<tr>
<td>Repairs to newly acquired assets</td>
<td></td>
<td>32,000</td>
</tr>
<tr>
<td>Increase in general provision</td>
<td></td>
<td>17,000</td>
</tr>
<tr>
<td>Mrs. Katebe’s salary</td>
<td></td>
<td>28,600</td>
</tr>
<tr>
<td>Excess salary paid to the niece</td>
<td></td>
<td>(7,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>105,350</td>
</tr>
</tbody>
</table>

Less:

- Capital allowances                        |         | (62,100) |

**Taxable business profit**

<table>
<thead>
<tr>
<th>Amount</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>256,500</td>
</tr>
</tbody>
</table>
(c) The following are the tests used by Zambia Revenue Authority:

(i)  Work performance
Employees must perform the duties assigned to them themselves, while self-employed may hire other people to perform the work for them. If a person does not have a right to hire helpers, that is likely to lead to the conclusion that there is employee.

(ii) Engagement and dismissal
The employer will take on and dismiss employees. The employer will have a right to terminate the contracts of employment by giving employees the appropriate notice. A self-employed person will normally enter into a contract with a client specifying the beginning and end.

(iii) Tools and equipment
An employer will provide the tools and equipment which the employees are to use. Self-employed individuals will provide their own tools and equipment, though in certain types of employments, employees will normally be required to provide their own tools and equipment.

(iv) Control
The work of an employee is controlled by the employer who will normally stipulate working hours, the place at which the duties are to be performed, how the work is to be performed and other conditions. A self-employed person will decide when to perform the duties and how to perform them.

(v) Correction of work
Employees will normally rectify any faulty work during the normal working hours and they will still be paid for those hours. Self-employed persons will rectify any faulty work outside the contract time and they will not be paid for their extra work.

(vi) Exclusivity
Employees normally work for only one employer. A self-employed person will normally work for a wide range of clients.
SOLUTION THREE

(a) Value added tax

(i) Tax point is the time when a supply is deemed to have taken place. The basic tax point is the time when goods are made available or services rendered to a customer.

The basic tax point can be changed if:

i. The tax invoice is issued before the basic tax point. In this case the tax point is the date when the tax invoice is issued.

ii. The tax invoice is issued within fourteen (14) days after the basic tax point; in this case the tax point is the time when the tax invoice is issued.

(ii) A trader may be deregistered under the following circumstances:

- If the business is sold or cease to trade permanently
- If the Zambia Revenue Authority is satisfied that the trader is no longer making taxable supplies nor intending to make taxable supplies
- If there is a change in the legal status of the business of the trader
- If a trader had applied for registration before commencing trading and that the trader fails to commence trading on the expected date.
- If a trader submits nil returns for twelve (12) consecutive standard periods
- When a trader’s VAT exclusive turnover of taxable supplies falls below the registration threshold.

(iii) The following are the advantages of registering for VAT voluntarily:

- The trader will be able to reclaim input VAT on expenses as long as that input VAT is recoverable
- The impression of a substantial business will be given since it is believed that traders should only register for VAT if the turnover is substantial
- The business will compete well with other businesses which are registered for VAT in that their cost will not be distorted by being VAT inclusive.

(b) Mathews

VAT payable for the month of October 2018

\[
\begin{array}{lcr}
\text{K} & \text{K} \\
\hline
\text{Output VAT} & \\
\text{Exempt sales: K113,600 x 15%} & 15,450 \\
\text{Standard-rated sales: K113,600 x 85% x 16%} & 15,450 \\
\hline
\text{Input VAT} & \\
\text{Exempt purchases: K68,160 x 15%} & - \\
\text{Standard-rated purchases:} & \\
\text{K68,160 x 85% x 16%} & 9,270 \\
\text{Overheads: K12,992 x 4/29 x 85%} & 1,523 \\
\text{Entertainment expenses} & - \\
\text{Motor van: K40,600 x 4/29} & 5,600 \\
\text{Diesel: K5,800 x 4/29 x 90%} & 720 \\
\hline
\text{VAT refundable} & (17,113) \\
\text{Total} & (1,663) \\
\end{array}
\]
(c) Tax avoidance and tax evasion

(i) The difference between tax avoidance and tax evasion is that; tax avoidance is the minimization, deferring or elimination of tax, that would have legally owed; by taking advantage of the loopholes within the tax legislation.

On the other hand tax evasion is the minimization or elimination of tax liabilities through dubious or illegal means. E.g non-disclosure of income

(ii) The following are the consequences of tax evasion on the economy:
- Loss of revenue for the government that directly affect the debt level and jeopardize its capacity to provide the services
- People who comply with the law bear a heavier tax burden than they should because they must compensate for those who evade tax.
- Businesses that fulfill their tax obligations face unfair competition from those that do not comply.

SOLUTION FOUR

(a) Residence of the company

(i) A company is regarded as resident in Zambia if:
- It is incorporated in Zambia and;
- The effective control; and management is exercised in Zambia.

(ii) Coffee Ltd is held to be resident in Kenland where it was incorporated from. Despite having its majority of branches located in Zambia.

Bream Ltd is a Zambian resident company because it was incorporated in Zambia and the effective control and management is in Zambia.

(b) The following are the qualities of a good tax system:

i. Taxation should bear lightly as possible on production

ii. Taxes should be easy and cheap to collect, and fall directly on the ultimate payer

iii. Taxes should be certain and easy to understand. If tax rules are complex, they can be evaded

iv. Taxes should bear equally so as to give no individual an advantage. Taxes should be levied on the ability to pay basis

v. Taxes should be flexible; meaning tax should automatically adjust to changes in the rate of inflation

vi. A tax system should be compatible with the foreign tax system. e.g SADC and COMESA

vii. A tax system must not hinder efficiency
(c) Customs and excise duties

(i) Import duties

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value for duty purposes</td>
<td>$32,100</td>
</tr>
<tr>
<td>Cost</td>
<td>32,100</td>
</tr>
<tr>
<td>Shipping costs</td>
<td>4,500</td>
</tr>
<tr>
<td>Insurance</td>
<td>5,600</td>
</tr>
<tr>
<td>Incidental costs</td>
<td>1,200</td>
</tr>
<tr>
<td>VDP in US$</td>
<td>43,400</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>K9.35</td>
</tr>
<tr>
<td>VDP in Kwacha</td>
<td>405,790</td>
</tr>
</tbody>
</table>

**Total value**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customs duty @15%</td>
<td>60,869</td>
</tr>
<tr>
<td>Excise duty @0%</td>
<td>0</td>
</tr>
<tr>
<td>Import VAT @16%</td>
<td>74,665</td>
</tr>
<tr>
<td><strong>Total import taxes</strong></td>
<td><strong>135,534</strong></td>
</tr>
</tbody>
</table>

(ii) Transaction value method can only be used if the following conditions are met:

i. There should be no restrictions to the use of the goods
ii. There should be no conditions to deter the determination of the VDP
iii. No part of the proceeds on resale would accrue to the seller, unless included in the value
iv. No relationship exists to influence the value.

(iii) The following is the clearance procedure for a motor vehicle:

i. Presentation of genuine import documents
ii. Revaluation by customs if necessary
iii. Payment of customs duty, excise duty, VAT and processing fee
iv. Processing of the declaration in form CE20 by customs.

**SOLUTION FIVE**

(a) Basis of assessment and accounting dates

(i) AB Ltd prepared its first accounts for a period of seventeen (17) months from 1 August 2017 to 31 December 2018. The commencement rules will be applied. The period should be split into two notional accounting periods with the first period consisting of less than twelve (12) months and the second one with exactly twelve (12) months.

First five months: 1 August to 31 December 2017

K295,800 x 5/17 = K87,000

(1 mark)

Last twelve months: 1 January to 31 December 2018

K295,800 x 12/17 = K208,800
The basis of assessment for both periods is the current year basis of assessment. The profits for the first 5 months ended 31 December 2017 and the last 12 months ended 31 December 2018 should be taxed in the tax years 2017 and 2018 respectively.

**AB Ltd**

**Adjusted Business profit for the tax years**

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business profits</td>
<td>87,000</td>
<td>208,800</td>
</tr>
<tr>
<td>Less: Capital allowances (w1)</td>
<td>(8,400)</td>
<td>(41,150)</td>
</tr>
<tr>
<td>Taxable profits</td>
<td>78,600</td>
<td>167,650</td>
</tr>
</tbody>
</table>

**Workings**

**Capital allowances for the tax years**

**2017**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost/ITV (K)</th>
<th>Capital allowances (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>120,000</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @2%</td>
<td>(2,400)</td>
<td>2,400</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>117,600</td>
<td></td>
</tr>
<tr>
<td>Motor Car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @20%</td>
<td>(6,000)</td>
<td>6,000</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>24,000</td>
<td></td>
</tr>
</tbody>
</table>

**Total capital allowances**: 8,400

**2018**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost/ITV (K)</th>
<th>Capital allowances (K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITV b/f</td>
<td>117,600</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @2% of 120,000</td>
<td>(2,400)</td>
<td>2,400</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>115,200</td>
<td></td>
</tr>
<tr>
<td>Motor car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITV b/f</td>
<td>24,000</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @20% of 30,000</td>
<td>(6,000)</td>
<td>6,000</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>18,000</td>
<td></td>
</tr>
<tr>
<td>Office equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>35,000</td>
<td></td>
</tr>
<tr>
<td>W &amp; T @25%</td>
<td>(8,750)</td>
<td>8,750</td>
</tr>
<tr>
<td>ITV c/f</td>
<td>26,250</td>
<td></td>
</tr>
<tr>
<td>Delivery van</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>40,000</td>
<td></td>
</tr>
</tbody>
</table>

172
W & T @25% (10,000) 10,000
ITV b/f 30,000

General Machinery
Cost 56,000
W & T @25% (14,000) 14,000
ITV cf 42,000
Total capital allowances 41,150

(ii) AB Ltd
Income tax payable for the tax year 2018
K
Business profits 167,650
Income tax @35% 58,678

(b) The following badges of trade are explained:

i. Subject matter of realization
Some assets are normally held as trading stocks, while others are not. If the asset that has been sold is one which is normally held as trading stock, the presumption that a trade is being conducted will be greater.

ii. Length of period of ownership
Trading stock is not normally held for a long period of time. If the person disposes of an asset that they held for a long period of time, it will be difficult to determine whether the asset had been held as a trading stock.

iii. Frequency of similar transactions
If the frequency of similar transactions is high, the chances of classifying a taxpayer as a trader are high. The lower the frequency of similar transactions, the lower the presumption that one is in trade.

iv. Circumstances giving rise to realization
The circumstances that led to the sale will also be taken into account when an asset is sold. If a taxpayer disposes of an asset in order to raise money to help solve a financial problem, the presumption that one is in trade is very low.

v. Taxpayer’s intention
Intention to trade clearly constitute trading. It has, therefore, to be established whether a taxpayer sold an asset with the intention to trade.

END OF SOLUTIONS
DIPLOMA IN ACCOUNTANCY PROGRAMME EXAMINATIONS

LEVEL TWO

DA 11: PRINCIPLES OF AUDITING

THURSDAY 14 JUNE 2018

TOTAL MARKS – 100; TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question.

2. This paper is divided into TWO sections:
   Section A: There are two (2) compulsory questions.
   Section B: There are three (3) questions. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. Cell Phones are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – TWO COMPULSORY QUESTIONS

Attempt BOTH questions in this section.

QUESTION ONE

Magoye Plc. was until recently a privately owned private company. It obtained a listing on the Lusaka Stock Exchange one year ago.

It has an internal audit department which carries out financial audits of Magoye Ltd. Because of the changed status after incorporation, it has become necessary that the financial statements of Magoye Plc. be audited by external auditors. At its first annual general meeting, it was resolved that, in line with legal requirements external auditors need to be appointed.

A resolution was passed to appoint Mwila & Associates Chartered Accountants as the first external auditors of Magoye Plc. It was proposed and resolved at the same meeting that the board of directors should set up an audit committee.

With the appointment of external auditors, the majority of the shareholders were of the view that the company does away with the internal audit department arguing that this will be a duplication of effort and cost because both the internal and external auditors perform the same tasks. It was resolved that Magoye Plc. outsources the internal audit services from Mwila & Associates Chartered Accountants.

In view of work pressures arising from several clients having the same period end, Mwila & Associates Chartered Accountants is considering the use of Computer Assisted Audit Techniques (CAATs) to carry out the audit. It is hoped that through the use of Computer Assisted Audit Techniques, the firm will not need as much human resources as would otherwise be the case.

The year-end of Magoye Plc. is in one month’s time and you have determined that your firm will need to attend the year-end inventory count because inventory is considered material in the financial statements. You have assigned staff to attend the inventory count who are not familiar with their role during inventory count. Magoye Plc. has a wide range of inventory items including items returned by customers and damaged goods. No adjustment in the financial statements has been made for returned and obsolete goods.

Being the first year to audit the financial statements of Magoye plc. your firm will need to prepare audit papers and open a permanent audit file and a current audit file. Your partner has requested for your full involvement in coming up with the two working papers to ensure that the correct records are contained in each of them.

Required:

(a) Explain five (5) roles of the recently constituted audit committee of Magoye Plc.  

(b) State five (5) advantages to Magoye Plc. of outsourcing the internal audit function from Mwila & Associates Chartered Accountants.
Explain four (4) benefits to Mwila & Associates Chartered Accountants of using Computer Assisted Audit Techniques (CAATs) in the audit of the financial statements of Magoye Plc. 

(d) Explain five (5) audit procedures the auditors should perform during the attendance of the inventory count of Magoye Plc. 

(e) State three (3) examples of documents that will be contained in the permanent audit file and three (3) examples of documents that will be contained in the current audit file of Magoye Plc. 

[Total: 25 marks]

QUESTION TWO

(a) One of the fundamental ethical principles of accountants is that of objectivity. It is required that auditors should be objective in the performance of their work and suitable safeguards should be put in place to mitigate any threat to objectivity.

Required:

(i) Explain the meaning of objectivity with regards the work of external auditors. 

(ii) Explain, giving one (1) example each, the five (5) categories of threats to the independence of the auditor which subsequently impair objectivity. 

(b) Your firm of Chartered Accountants is the auditor of Chongwe Ltd and you are about to commence the audit for the financial year ended 31 March 2017.

You have been appointed as senior auditor for this audit and you will be leading a three man team.

Chongwe Ltd is in hardware business and buys goods for resale to consumers who include commercial customers and individuals. The company has three retail outlets in Lusaka.

The company has a stores department which is responsible for storage and accounting for stocks. When the shops need to replenish stocks, items are transferred to the shops on the basis of approved stores requisitions and stock records are updated as appropriate. When there is need to order more goods, stores department initiates the process and the Stores Manager authorizes all purchases by signing a purchase requisition.

The purchasing department is responsible for ordering the goods and the goods are delivered straight to the warehouse where a Goods Received Note (GRN) is raised and the relevant stock card updated.

The company operates a perpetual inventory system whereby every item is counted at least once during the financial year. The counts are carried out by staffs who are not involved in the storage and handling of stocks.
Required:

(i) Explain the importance of planning the audit of Chongwe Ltd for the year ended 31 March 2018. (5 marks)

(ii) Identify four (4) internal controls that exist in Chongwe Ltd. (4 marks)

(iii) For each control in (ii) above describe a suitable test of control that you should carry out. (4 marks)

[Total: 25 Marks]
SECTION B
There are THREE (3) questions in this section. Attempt any TWO (2) questions.

QUESTION THREE
Lunsefwa Ltd has a year end of 31 December. You are about to commence the audit for the year ended 31 December 2017.

Your firm has recently recruited a number of audit assistants. A team of four auditors including two newly recruited audit assistants has been constituted. Your partner has requested you to lead the team in the performance of the current audit.

The following figures have been extracted from the draft financial statements of Lunsefwa Ltd

K000

 Accounts Receivables  8 000
 Accruals            2 000

The client has given you schedules detailing the make-up of the above figures. These balances were extracted from the general ledger.

Subsequent to the year end the following matters were established.

(i) Muchinga Ltd who owed Lunsefwa an amount of K3million has gone into liquidation. On 15 February 2018 before finalisation of the audit the Supreme Court determined that the company should be liquidated and will only be able to pay 50% of its debts.

The K3million owed by Muchinga is included in the accounts receivables figure of Lunsefwa Ltd.

(ii) A fire gutted half of the inventory that existed and included in the inventory figure of Lunsefwa Ltd at the year end.

Your partner has requested you to arrange a pre-audit engagement team meeting at which he wants you to emphasize to the audit team the need to obtain sufficient appropriate audit evidence.

At the end of the audit, you establish that there is a material uncertainty relating to the going concern aspect of Lunsefwa Ltd. This has been adequately disclosed and explained in the notes to the financial statements of Lunsefwa Ltd.

Required:

(a) Explain the reliability and quality of audit evidence gathered by the auditor to obtain sufficient appropriate evidence. (5 marks)

(b) Explain five (5) audit procedures that the firm will carry out in gathering audit evidence for the figures of accounts receivables and the accruals. (5 marks)

(c) Explain the action your firm will take in view of the two (2) events that took place after the reporting period. (6 marks)
(d) Explain the responsibilities of management and the auditors with regards to going concern of Lunsefwa Ltd. (4 marks)

(e) Explain the impact on the auditor’s report of the material uncertainty that exists in Lunsefwa Ltd. (5 marks)

[Total: 25 Marks]

QUESTION FOUR

You are the Audit Manager of Chitembo & Co. in charge of the interim audit for Gelita Ltd. The company operates as a wholesaler of various commodities from reputable companies and has ten branches situated throughout Zambia.

The Audit Senior has just completed reviewing documentation of Gelita Ltd.’s internal controls regarding credit sales. ISA 315 Identifying and assessing the risks of material misstatement through understanding the entity and its environment deals with the whole area of controls. It points out that there is a direct relationship between an entity’s objectives and the controls that it implements to provide reasonable assurance about their achievement.

Credit sales approval and credit control are the responsibility of the General Manager. When a customer applies for credit facilities, the General Manager requests the customer to fill in a standard application form which was designed by him.

The form includes the following details:

(i) The customer’s name and occupation or nature of business if the applicant is a company.
(ii) Age and gender.
(iii) Bank details for the past six (6) months.

The General Manager uses an in-house credit rating to determine the credit limit for each applicant. Some applicants are rejected based on the General Manager’s discretion and no reasons are given.

Accounts receivables payment records are monitored on a continuous basis. The General Manager instructs the Chief Accountant to follow up selected overdue debts. The business prospects are improving following the removal of street vendors from the streets in all the central business districts in all the provincial capitals. The General Manager has decided to increase the average collection period from one to two months. This relaxation in credit is expected to produce an increase in sales in each year amounting to 40% of the current sales volume.

Internal controls relating to dispatch, invoicing and receipting of payments have been assessed as strong.

You have directed the Audit Supervisor to obtain sufficient appropriate audit evidence to support the following key financial statement assertions relating to credit sales:

(i) Completeness
(ii) Cut-off
(iii) Occurrence
(iv) Existence
Required:

(a) Define internal control and explain the components of an internal control system. (6 marks)

(b) Identify and explain six (6) deficiencies in the internal control system for the credit sales in Gelita Ltd. (9 marks)

(c) Suggest appropriate recommendations to address deficiencies identified in (b) above. (6 marks)

(d) Describe one test of control for each financial statement assertion given in the scenario relating your answer to credit sales. (4 marks)

[Total: 25 Marks]

QUESTION FIVE

(a) The concept of auditing arises on account that as organizations grow, there is a clear separation between management and ownership.

The owners leave stewardship of organizations in the hands of management who are stewards and are expected to act in the best interest of the owners.

The link between management and the owners is in the financial statements which are presented and considered at the annual general meeting. The need for the auditor to audit the financial statements on behalf of the shareholders and form an opinion is therefore apparent.

This relationship between the client, the shareholders and the auditor is referred to as an assurance engagement.

Required:

Explain the elements of an assurance engagement. (5 marks)

(b) You are the audit manager in your firm of Chartered Accountants. You are in charge of the audit of Kabompo Ltd.

A review of the income statement for the year under review shows a profit on disposal of a Motor vehicle of K89 000 which has been arrived at as follows:

\[
\begin{align*}
\text{Sales proceeds of the vehicle} & \quad 289\,000 \\
\text{Cost of the vehicle} & \quad 500\,000 \\
\text{Less Accumulated depreciation} & \quad 300\,000 \\
\text{Net book value} & \quad 200\,000 \\
\text{Profit on disposal of the vehicle} & \quad 89\,000
\end{align*}
\]

Kabompo Ltd maintains a tangible non-current asset register.
The following additional information about Kabompo Ltd is provided:

1. The company has a large fleet of heavy duty vehicles and often rehabilitates ageing fleet by buying new engines whose cost is capitalized. The company also spends substantial amounts on repairs and maintenance of the fleet.
2. Due to the ageing fleet, the company has in the current year changed the make of trucks in use. The company is in the process of phasing out the old fleet of trucks.
3. The company maintains spares for the old fleet most of which cannot be used on the new fleet. Most of the buyers of the old trucks will most probably buy spares from non-genuine vehicle spare dealers which are much cheaper than the genuine spares of Kabompo Ltd.
4. Kabompo Ltd uses the services of motor vehicle repair companies for major works such as the changing of engines. At the year end the company owes one such company an amount of K30 000.00 for works carried out but which amount Kabompo Ltd is disputing.
   The motor vehicle repairer has sued Kabompo Ltd and the case is in the High Court awaiting determination
5. Kabompo Ltd has experienced labour disputes in the last two years and these have resulted in work stoppages affecting production.
6. Kabompo Plc. is intending establishing an internal audit function but management is divided on this issue because others do not see benefits of this function to the organization.

Required:

(i) Explain, giving an example, the meaning of material misstatement of financial statements. (3 marks)

(ii) Identify and explain five (5) risks of material misstatements in Kabompo Ltd. (10 marks)

(iii) Explain four (4) factors that might be considered in assessing the need for an internal function in Kabompo Ltd. (6 marks)

(iv) Describe four (4) audit procedures that should be undertaken in the audit of the profit on disposal of the motor vehicle of Kabompo Ltd. (6 marks)

[Total: 25 marks]

END OF PAPER
DA 11 PRINCIPLES OF AUDITING SOLUTIONS

SOLUTION ONE:

a) The roles and responsibilities of the audit committee of Magoye Plc.:

i. The audit committee acts as a deterrent to fraud as its very existence will reduce the opportunity for fraud to take place.

ii. Guides and advises the rest of the board on matters relating to the financial statements.

iii. Having an audit committee can improve the quality of the financial statements as the committee reviews the financial statements on behalf of the board.

iv. Since the committee comprise of non-executive directors, it enables them to contribute an independent judgment and play a positive role.

v. The committee provides a forum for the finance director to raise matters of concern, and which he can get things done which otherwise might be difficult to get done.

vi. The committee strengthens the position of the external auditors by providing a channel of communication for any matters of concern.

vii. Enhances the independence of the internal auditor by having the internal audit department to report to it rather than the finance director.

viii. The existence of the committee increases public confidence in the credibility and objectivity of the financial statements

ix. To review the company’s internal controls to ensure they remain relevant in helping the company meets its objectives and protects the assets.

x. To make recommendations to the board and put to the shareholders for their approval in general meeting in relation to the appointment, reappointment and removal of the external auditor

xi. To review and monitor the independence of the external auditors.

b) Advantages of outsourcing of internal audit to Magoye Plc.:

i. Outsourcing is a faster method of setting up an internal audit department as providers of these services are readily available.

ii. There is no need to recruit staff because the service provider has good quality staff.

iii. The company can take advantage of specialist skill that the service providers have who are able to assess the requirements of the company.

iv. Associated costs of an in-house internal audit department such as training costs are eliminated.

v. The service contract with the provider can be a specified period only as required.

vi. Can be used for a short term basis and so cost savings are made.

vii. The firm will have wide knowledge of the operations of Magoye Plc. gained from the audit services currently being offered.
c) Benefits of using CAATs to Mwila & Associates:
   i. Computer Assisted Audit Techniques (CAATs) can facilitate work to be performed faster than if manual procedures were used.
   ii. A greater number of items can be tested using CAATs and so reducing the detection risk.
   iii. The auditors test transactions rather than paper records of transactions that could have been incorrect.
   iv. The results from CAATs can be compared with the results of traditional testing methods and so increasing confidence overall.
   v. Through the use of CAATs it is possible to test programme controls as well as general internal controls in computer systems.

d) Auditor responsibilities during attendance of inventory count:
   i. Observe whether the inventory count instructions are being followed during the count.
   ii. Conduct test counts which will be used to compare with counts carried out by the client staff.
   iii. Ensure that the procedures regarding damaged and slow moving items are followed and such items are identified.
   iv. Confirm that inventory held for third parties such as good sold not collected are identified and not included in the client inventory at the period end.
   v. Conclude whether the count conducted has been properly carried out and is sufficiently reliable as a basis for determining closing inventory value.
   vi. Gain an overall impression on the value of inventory held and judge whether the closing inventory figure in the financial statements is reasonable.
   vii. Watch out for any cut off problems at the period end and get details of the last documents raised during the year e.g. Last Good Received Note, Delivery note etc.

e) Documents that will be in permanent file:
   Contain information of continuing importance including the following:
   i. The engagement letter
   ii. The memorandum and articles of association
   iii. Legal documents such as prospectus, leases and sales agreements
   iv. Details on the nature of the client’s business
   v. Previous year financial statements
   vi. Details of the accounting system and relevant questionnaires
   vii. New client questionnaire

Documents that will be in current file:
   i. The current year financial statements
   ii. Accounts checklists
   iii. Management letter
   iv. Letters of representations
   v. Management letter
   vi. Communications with third parties
   vii. Current year working papers
   viii. Review notes of the working papers
   ix. Summary of unadjusted errors
   x. Report to partner including details of significant events and errors
SOLUTION TWO:

a) i. **Meaning of objectivity in the audit of financial statements:**

Objectivity is one of the fundamental principles of accountants and auditors. This means that the auditor should not be biased and influenced by others in the performance of their duties and making decisions.

In order that the auditors issue and appropriate audit opinion, it is necessary that they are objective.

ii. **Threats to the independence and subsequently objectivity of the Auditors:**

The threats to the independence of the auditor fall into the following categories.

**Self-interest threat** – this is a threat that a financial or other interest that the auditor may have in a client company will inappropriately influence the professional judgment or behavior of the auditor.

**Example:**
A family or personal relationship, for example, the Chief Accountant of the client company is a son to the audit engagement partner.

**Other examples can include:**
- employment with an assurance client
- partner on client board
- gifts and hospitality
- loans & guarantees
- overdue fees
- % or contingent fees
- High % of fees
- Lowballing
- Recruitment on behalf of the client
- Financial interest
- Close business relationships

**Self-review threat** – this arises where the auditor evaluates the results of a previous judgment that he made.

**Example:**
This can arise where the auditor is involved in the preparation of the client’s financial statements and later is required to audit the same financial statements. He is unlikely to criticize his own work and so will not be objective.
*Other examples:*

- Valuation services carried out by the auditor
- Internal audit services offered
- Corporate finance on behalf of the client
- Recent service with an assurance client
- General other services

**Advocacy threat** – this is the threat that the accountant/auditor will promote a client’s position to an extent that his objectivity is compromised.

**Example:**

The auditor may act as an advocate for a client in litigation against the client or disputes with third parties.

*Other examples:*

- The firm promoting shares in a listed audit client.

**Familiarity threat** – is a threat that arises due to close relationship or long association with a client. This will result in the auditor being sympathetic to the interest of the client and so lose objectivity.

**Example:**

The auditor may audit the client for a long time in a position of say audit manager or engagement partner. Because of the long association, the auditor will lose independence due to the familiarity that arises due to long association.

**Intimidation threat** – this arises where there is actual or perceived pressure on the auditor which may deter the auditor from acting objectively.

**Example:**

The client threatening not to pay the audit fee due unless, the auditor gives a preferred opinion by the client.

*Other examples:*

- Could arise from family or personal relationships
- Litigation
- Close business relationships

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**b) i. Why planning will be important for Chongwe Ltd:**

- Planning helps the auditor to devote appropriate attention to areas that are important to the audit
- Planning helps the auditor to identify and resolve potential problems timely
- Helps the auditor to organize and manage the audit so that it is performed in an effective manner
- Helps the auditor to select and assign appropriate audit team members to do the work
- Planning facilitates direction, supervision and review of the audit
- Assists in the coordination of work done by auditors of components and experts
ii. /iii internal controls and suitable tests of controls:

**Control:**
There is segregation of duties between storage of inventory and purchasing.

**Test of control:**
Observe that there is clear segregation of duties between the purchasing department and the stores department.

**Control:**
Stocks are only issued to the shop on the strength of duly approved stores requisition.

**Test of control:**
For a sample of items received in the shop, confirm that there is an approved requisition supporting the movement from stores.

**Control:**
Stock records are maintained for all items held in stock and these are updated on issue and receipt of goods.

**Test of control:**
For a sample of approved and used stores requisitions and goods received notes confirm that the relevant stock cards have been updated.

**Control:**
All purchases of stocks are approved by the Stores Manager before purchasing department procures.

**Test of control:**
Confirm that executed purchase requisitions have been approved by the Stores Manager.

**Control:**
Goods Received Notes are raised for all receipts of goods and all goods are received directly by the Stores department.

**Test of control:**
For a sample of goods ordered, match to the related GRN to confirm that all goods are acknowledged by raising a GRN.

**Control:**
There is a perpetual inventory system in place which helps in ensuring that there is adequate control over stocks held and reduces chances of pilferage through theft etc.

**Test of control:**
Witness the carrying out of inventory count by attending stock taking when this is being done by the client and observe what goes on.
SOLUTION THREE:

a) Quality of audit evidence:

External evidence:
Evidence from external sources is more reliable that the evidence obtained from the records of the entity because this is from independent sources.

Auditor generated evidence:
Evidence obtained directly by the auditor is more reliable than evidence obtained indirectly.

Entity generated evidence:
Is more reliable when the related controls operate effectively than when they do not.

Written evidence:
In the form of documents, paper or electronic or written representations are more reliable than oral representations, because oral representations can be retracted.

Original documents:
Original documents are more reliable than photocopies which can easily be altered by the client.

b) Audit procedures:

Accounts receivables K8million
- Cast the list of receivables to ensure that it adds up to the K8 million in the financial statements
- Confirm that the amount on the list of receivables and the financial statements agrees with the balance in the relevant control account in the general ledger
- Obtain a sample of receivables at the period end and circularize
- Review the receivables aged analysis and confirm that adequate provision for receivables for old outstanding debts has been made

Accruals K2million
- Obtain the schedule of accruals and confirm that it only includes accruals that are normal in the industry
- Cast the schedule of accruals and follow balance to relevant ledger account
- For a sample of amounts included in accruals examine calculations
- For a sample of accruals confirm post year end payments and compare with amounts provided for at the year end
- Assess management estimation of accrued figures by examining prior year accruals to actual amounts paid
- Obtain written representations for those accruals for which no other evidence is available using other audit procedures

c) i. Muchinga Ltd debt:
This is an adjusting event because after the period end and before the audit report, it is clear how much will be received from Muchinga Ltd. As the outcome is that only 50% of the debts owed by Muchinga will be paid, then this will require that the financial statements be adjusted. Since a debt of K3million has been recognized at the year end, an amount of K1.5million would be written off so that the balance on that date shall be K1.5million only.
The matter will be discussed with management and will require that the adjustment is made in line with guidelines by accounting standards.

ii. **Destruction of inventory by fire**
The incident of a fire that gutted inventory after the period end is a non-adjusting event. The inventory existed at the period end and so the inventory value will not need to be adjusted. It will be necessary to ensure that no adjustment to the Inventory figure is done. Management may wish to disclose this as a note in the financial statements.

d) **Management’s responsibility with regards to going concern:**
IAS 1 Presentation of financial statements contains the requirement concerning management with regards going concern. The management is responsible for assessing whether or not the entity is a going concern at the period end. Management should make an assessment that the organization will continue operating in the near foreseeable future covering a period of not less than twelve months.

**The responsibility of the auditor** with regards to going concern is guided by ISA 570 (Revised) *Going concern.* The objective of the auditor with regards to going concern of a client company is to obtain sufficient appropriate audit evidence regarding, and conclude on, the appropriateness of management’s use of the going concern basis of accounting in the preparation of the financial statements.

e) **Impact on the audit report of material uncertainty:**

Material uncertainty may cast doubt on the entity’s ability to continue as a going concern. Where it exists as is the case here, the material uncertainty will have an impact on the opinion issued in the auditor’s report because the uncertainty must be disclosed.

The impact on the audit report in the case at hand is as follows:

- Because the going concern basis of accounting is appropriate and the fact that the uncertainty has been adequately disclosed, the audit opinion will be unmodified.
- The audit report will:
  - Include an explanatory paragraph below the Basis for Opinion paragraph headed ‘Material Uncertainty Related to Going Concern’ detailing the uncertainty.
  - Reference will be made in the above to the disclosure in the financial statements.
**SOLUTION FOUR**

a) **Definition of internal control:**

Internal control is the process designed and effected by those charged with governance, management, and other personnel to provide reasonable assurance about the achievement of the entity’s objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations.

The five elements of internal control are:

1. The control environment – this includes the governance and management functions and the attitudes, awareness and actions of those charged with governance and management concerning the entity’s internal control and its importance in the entity. It is simply the framework within which controls operate.
2. Entity’s risk assessment process – this is the process for:
   - Identifying business risks relevant to financial reporting objectives
   - Estimating the significance of the risks
   - Assessing the likelihood of their occurrence
   - Deciding upon actions to address those risks
3. Information system relevant to financial reporting – this includes the financial reporting system, and consists of the procedures and records established to initiate, record, process and report entity transactions and to maintain accountability for the related assets, liabilities and equity. Controls surrounding journal entries are therefore very important.
4. Control activities – these are policies and procedures that help ensure that management directives are carried out. They include those activities designed to prevent or to detect and correct errors e.g. segregation of duties.
5. Monitoring of controls – this is the process to assess the effectiveness of internal control performance over time. It includes assessing the design and operation of controls on a timely basis and taking necessary corrective actions modified for changes in conditions.

(b) & (c) **Deficiencies and recommendations to address them:**

<table>
<thead>
<tr>
<th>Deficiency</th>
<th>Explanation</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Credit sales approval and credit control are the sole responsibility of the General Manager.</td>
<td>The General Manager may be biased when approving credit facilities. He may favor his relatives and friends.</td>
<td>An independent committee should be appointed to approve credit facilities. There should be proper segregation of duties between credit sales approval and credit control.</td>
</tr>
<tr>
<td>2. Standard application form designed by General Manager.</td>
<td>The standard application form may not contain all the relevant details.</td>
<td>An experienced senior finance person should review the details on the standard application form and recommend appropriate changes.</td>
</tr>
<tr>
<td>3. In-house credit rating to determine the credit limit.</td>
<td>The credit rating may not be credible.</td>
<td>Consider using credible external rating agencies.</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>4. Rejection of applicants by General Manager without giving reasons.</td>
<td>This could frustrate potential good customers. The reputation of Gelita Ltd could be damaged.</td>
<td>Reasons must be given for every application rejected.</td>
</tr>
<tr>
<td>5. Selective follow-up of overdue debts.</td>
<td>This could increase the levels of bad debts, resulting in reduced cash flows.</td>
<td>All the overdue debts must be followed up.</td>
</tr>
<tr>
<td>6. Decision by General Manager to increase average collection period.</td>
<td>This could also increase the levels of bad debts.</td>
<td>A proper cost/benefit analysis should be conducted.</td>
</tr>
</tbody>
</table>

d) **Test of controls for the stated financial statement assertions:**
   1. Completeness – trace a sample of dispatch notes to the credit sales invoices and receivables ledger.
   2. Cut-off – compare dates on credit sales invoices with dates of corresponding dispatch notes.
   3. Occurrence – select a sample of credit customer orders made and inspect copy of respective dispatch notes and credit invoices.
   4. Existence – Inspect of invoices and related dispatch notes and agree to entries made in receivables ledger.

**SOLUTION FIVE**

a) **Elements of an assurance engagement:**

   A **three party relationship** – the three parties to an assurance engagement are the intended user, the responsible party namely the management and the practitioner who is the auditor.

   A **subject matter** – being what is being evaluated and upon which an opinion shall be formed. In an audit of financial statements this will be the financial statements subject to the audit.

   Suitable **criteria** – this is the measure against which the subject matter is measured. In the case of financial statements, this could be the Company’s Act 1994 and the IFRSs.

   **Evidence** – this is the basis upon which the opinion is formed and must be sufficient and appropriate to support the opinion reached.

   An **assurance report** – is the outcome of the engagement and contains the practitioner’s opinion that is issued to the intended user.
b) i. **Meaning of material misstatement of financial statements**

Misstatements of the financial statements relates to the figures and disclosures contained in the financial statements being misstated. A figure is considered misstated if it is stated at an amount other than that which should have been recorded in accordance with the applicable financial reporting framework. A misstatement may arise from error or fraud.

ii. **Risks of material misstatement in Kabompo Ltd:**

**Overhaul of fleet:**
There is a risk that amounts spent on overhauling the trucks could instead be charged to revenue and so result in both capital expenditure and repairs being misstated.

**Disposal of vehicle:**
There is a risk that the calculation of the profit or loss on disposal of the trucks disposed of is incorrect. This can result in a misstatement of profit or loss on disposal of vehicles.

**Obsolete spares:**
Since the company has replaced its fleet but still has a large stock of spares for the fleet being phased out, there is a risk that the inventory of spares could be misstated.
In accordance with IAS 2, inventory should be valued at the lower of cost and net realizable value.

**Legal case**
The outcome of the legal case against Kabompo Ltd is not certain at the period end. There is a probability that Kabompo Ltd could be fined. The risk is that provisions may be misstated as the ultimate liability can only be ascertained after the case is disposed of.

**Labour disputes:**
The labour disputes may have an impact on the going concern status of the company. This has implications on the basis upon which the financial statements are prepared.

iii. **Factors to consider when assessing the need for internal audit function:**

1. The cost of setting up an internal audit department compared to the predicted benefits.
2. The savings in external audit fees where work carried out by external consultants will be carried out by the internal audit department.
3. The complexity and scale of the organization’s activities and the systems supporting those activities.
4. The ability of existing managers and employees to carry out assignments that internal audit may be asked to carry out.
5. Management’s perceived need for assessing risk and internal control.
6. Whether it is more cost effective or desirable to outsource the work.
7. The pressure from external stakeholders to establish an internal audit department.
iv. **Audit procedures in the audit of profit on disposal of motor vehicle:**

- Confirm that the disposal of the motor vehicle has been authorized by examining minutes of the board
- Confirm receipt of the sales proceeds by following through the cash book and bank statement as appropriate
- Confirm the cost of the vehicle and related depreciation to the relevant general ledger accounts
- Recalculate the profit or loss on disposal

**END OF SOLUTIONS**
INSTRUCTIONS TO CANDIDATES

1. You have fifteen (15) minutes reading time. Use it to study the examination paper carefully so that you understand what to do in each question. You will be told when to start writing.

2. This paper is divided into TWO sections:
   Section A: There are two (2) compulsory questions.
   Section B: There are three (3) questions. Attempt any two (2) questions.

3. Enter your student number and your National Registration Card number on the front of the answer booklet. Your name must NOT appear anywhere on your answer booklet.

4. Do NOT write in pencil (except for graphs and diagrams).

5. **Cell Phones** are NOT allowed in the Examination Room.

6. The marks shown against the requirement(s) for each question should be taken as an indication of the expected length and depth of the answer.

7. All workings must be done in the answer booklet.

8. Present legible and tidy work.

9. Graph paper (if required) is provided at the end of the answer booklet.
SECTION A – TWO COMPULSORY QUESTIONS

Attempt both questions

QUESTION ONE

Mali Bank Ltd is a registered commercial bank providing banking services to the community of a small town of Nakonde in northern Zambia. The shareholders are holding their first annual general meeting at which they intend to choose the board of directors and other officers of the company. Mr. Ndalama Mankuncha who is a renowned corporate governance practitioner, is the main shareholder in the bank and is thrilled at the roles and duties of the board of directors and wants an effective board. He wrote a circular to the other shareholders pleading with that, “our bank needs an effective board, we do not need rubberstamp or talking shop board. Our first board of directors needs to be an effective one to set a benchmark for the future boards of director”.

Required:

(a) Mr. Ndalama Mankuncha wants an effective board over the other two types mentioned above. State three weaknesses of:

(i) The rubberstamp board

(ii) The talking shop board

(b) Some of the company officers to be appointed at the first annual general meeting of Mali Bank Ltd are the directors and the company secretary.

(i) State three (3) roles of a company secretary in a limited liability company.

(ii) Explain the roles you have stated in (i) above.

(iii) State three (3) statute disqualifications for appointment as a director in Zambia.

(iv) Explain the disqualifications for appointment as a director in Zambia that you have stated in (iii) above.

(c) To expand to the other parts of the country, Mali Bank Ltd is thinking of ‘public issue of shares or issue out debentures’.

What is meant by:

(i) Public issue of shares

(ii) Issue out of debentures

[Total: 25 Marks]
QUESTION TWO

Corporate Governance can be defined in many different ways. However, one of the key definitions is that ‘it is the system or way by which organisations are directed and controlled’.

Required:

(a) Distinguish the following principles of good corporate governance:

   (i) Integrity and accountability (4 marks)

   (ii) Fairness and responsibility (4 marks)

(b) ‘Directors are agents of the company and not individual shareholders’.

   Discuss the correctness or incorrectness of the above statement. (6 marks)

(c) Explain any two advantages of winding up by striking off the register. (6 marks)

(d) With reference to the position of a director, explain ‘insider dealing’ and its implications on directors. (5 marks)

[Total: 25 Marks]
SECTION B

There are THREE (3) questions in this section. Attempt any TWO (2) questions.

QUESTION THREE

(a) Explain what nominal capital is. (5 marks)

(b) An annual general meeting is a meeting which is held every year by organizations to discuss various issues affecting them. Discuss the following issues in the light of business conducted at the AGM:

(i) Election of Directors (5 marks)
(ii) Declaration of Dividends (5 marks)
(iii) Consideration of the Company’s Books (5 marks)

(c) Describe the process of voluntary winding up. (5 marks)

[Total: 25 Marks]

QUESTION FOUR

Write short notes on the following:

(a) The concept of limited liability. (5 marks)
(b) Articles of Association. (5 marks)
(c) Common seal of a company. (5 marks)
(d) Directors as Agents of a company. (5 marks)
(e) Annual General Meeting. (5 marks)

[Total: 25 Marks]

QUESTION FIVE

Mr. Offday Simunka is the managing director of Earnles Group of Companies which is a large public limited company with interests in mining and forestry. The group’s profits have drastically fallen in the last three years causing the company’s share price to fall on the stock market. At its last meeting, the company appointed AMG Chartered Accountants, a firm of auditors to audit its books and prepare a report.

The auditors’ report for the year ended 31st March, 2018 reviewed that ‘the profits of the company have fallen from last year’s K15 million to K5 million and the net assets of the company have fallen from K310 million to K207 million. To mitigate this, the company needs to come up with stringent measures which will reduce borrowing and control expenditure, failure to which the company would be bankrupt and its shares will keep falling’.

Mr. Offday Simunka is unhappy with the auditors’ report as he is scared of being fired should the report reach the Board of Directors with such statements, and he persuades them to delete the last part of the report and the auditors have agreed.
(a) What are the legal implications of the decision to ‘delete’ on the part of auditors? Explain your answer. (8 marks)

(b) The auditors have also recommended that the shareholders’ capital in the group be reduced so as to lessen the dividend burden on the company. Explain four (4) methods of reducing capital Earnles Group of Companies can use. (8 marks)

(c) What procedure will Earnles Group of Companies follow to reduce its capital? (5 marks)

(d) Looking at its performance, the shareholders are scared that the company may be wound up by the court. State four (4) grounds for winding up by the court. (5 marks)

END OF PAPER
DA12 GOVERNANCE AND CORPORATE LAW SOLUTIONS

SOLUTION ONE

(a) (i) Weaknesses of a rubber stamp board:

- Fails to consider alternatives
- Dominated by executives
- Relies on fed information
- Focuses on supporting evidence
- Does not listen to criticism
- Role of non-executives limited

(ii) Weaknesses of a talking shop board:

- No effective decision-making process
- Lack of direction from chairman
- Failure to focus on critical issues
- No evaluation of previous decisions

(b) (i) The following are the three roles of a Company Secretary:

- Arranging meetings of shareholders and the board of directors
  This involves giving notices, preparing the agenda, circulating minutes and communicates the decisions of the meeting to staff or outsiders.

- Signing, authentication and maintenance of documents and registers
  This includes completing and signing the annual returns, annual accounts, and maintaining statutory registers.

- General administrative duties
  The company secretary may act as a general administrator or office manager. He/she has to ensure compliance with the company constitution, and other statutory and regulatory requirements.

(ii) Three disqualifications for appointment as a director:

A person shall not qualify for appointment, continue to hold the office of director if the person is:

- A body corporate
- An infant or any other person under legal disability
- Removed or restrained by court order on account of misconduct
- An undischarged bankrupt or adjudged bankrupt

(i) Public Issue of shares – This occurs in a public limited company where it makes available for sale its shares to the members of the general public. This is done directly or through an issuing house or stock exchange.
(ii) Issue out of Debentures – this is an invitation to the public to lend (loan) money to the company. When debentures are issued out, members of the public subscribe for them i.e. lend money to the company and the money lent will attract a fixed rate of interest.

SOLUTION TWO

(a) The distinction is:

(i) *Integrity* means straightforward dealing and completeness. It means being honest, of high moral character and standing on one’s principles no matter the pressure to do otherwise. Whilst *Accountability* means being answerable for the consequences of one’s actions. For example the directors/management of the company will be accountable to shareholders and other stakeholders.

(ii) *Fairness* means being balanced by taking into account everyone who has a legitimate interest in the company, and respecting their rights and views e.g. the board must take into account the interests all stakeholders. Whilst *Responsibility* means the board/management must accept the credit or blame for governance decisions. They must act responsively to, and with responsibility towards all stakeholders of the company.

(b) The directors are agents of the company (all shareholders) and not individual shareholders. This is so because there is a separation between the company and its owners, making directors answerable to the company and not individual shareholders. Thus the owners (company as a whole) are the principal whilst the directors are the agents employed to carry out the instructions of the company. Therefore, to this extent, the above statement is correct.

(c) i. It saves time; and

ii. It is cheaper as compared to following the usual procedures of winding up a company.

(d) *Insider trading* is the use of inside information (i.e. specific information that has not yet been made public, and if made public would have a significant effect on the shares/stock as it is price sensitive information) by the directors to take advantage and buy or sell shares of the company the market. This is prohibited of directors

The implications of insider trading on the directors would be being liable to the company and must pay back any secret profit to the company, can be fired, or criminally liable/prosecuted as this undermines the integrity of the capital market.
SOLUTION THREE

a) Authorised capital, also known as the nominal capital of a company is the amount of capital that a company is allowed to issue. Put simply, this is the maximum amount of capital fixed by the company’s Articles that a company is permitted to issue at any given point.

It follows that; a company would be acting in breach of its Articles if it went ahead and issued a capital amount beyond the maximum amount of capital it is allowed to issue.

b) i. The election of Directors

The election and subsequent appointment of Directors to replace those retiring and/or those whose contracts the shareholders have resolved not to renew forms part of the business to be transacted at an annual general meeting. Once all the desired Directors have been appointed, the question of their remuneration will then too be considered at the same meeting.

ii. The declaration of dividends

Where a company has made a profit, and a declaration thereof is to be made, the same will be made at the annual general meeting of the company and will be followed by any discussions incidental thereto, if any.

iii. The consideration of the company’s books of accounts

The company’s books of accounts will also be considered at the annual general meeting e.g. the company’s balance sheets, income statements etc. Further, the gathering will also consider the reports tendered in by both the Directors and the Auditors.

c) Voluntary winding up

A voluntary winding up of a company is one in which the company through its members or creditors decide through a special resolution to wind up the company. A copy of the resolution is lodged within seven days with the Registrar of Companies and a liquidator is appointed by ordinary resolution who takes over from the directors the management of the company for the purpose of winding up. He will collect the assets, sell them, pay the creditors and submit report of liquidation and the resolution to the registrar of companies and patents, who will strike the company off the register of companies.
SOLUTION FOUR

a. **Limited liability**
   Limited liability is a concept akin to limited liability companies. The concept entails that; where a member has fully paid up for all the shares held by him, he is then absolved from any form of liability at the point of winding up of the company.
   It then follows that; if a member’s shares are not fully paid up for, then the converse is true, in fact, in terms of section 17 (3) as read with section 266 (1) of the companies Act, a member having any amount that remains unpaid on shares will be called upon to contribute to the assets of a company when the same is being wound up.

b. **Articles of association**
   At the point of incorporating a company it will have to have Articles of association. The Articles of association of a company form part of the constitution of the company as they provide for the rules and regulations by which a company will be required to abide by in terms of its operations.
   For the purposes of uniformity and arguably so, for efficiency, the companies Act provides for model Articles of association which promoters may, at the point of incorporation adopt and have registered as against the company. The promoters of a company can however amend the standard and/or model Articles of association in order that they may fall in line with the ‘special’ needs of the company.

c. **Common seal of a company**
   The concept of legal personality entails that a company is a person at law, separate and distinct from its members and/or Directors.
   It then follows that if a company is a corporate entity but then deemed to be a person at law, it is only but an artificial entity, existing only in the contemplation of the law and thus unable to do certain acts that can be done by a natural human being such as appending its signature to a document.
   By reason of the above, it is a legal requirement under section 195 of the Act that every company has a common seal bearing the company’s name and the words; *common seal*, the same of which suffices as a symbol of authority of or by the company.

d. **Directors as Agents of a company**
   A company being an artificial person at law can only have decisions made by, and indeed only act through its Directors. The Directors of a company though tasked with the day to day management of the company by the Act also act as the Agents of the company for which they manage.
The Directors as Agents of the company, if acting within the scope of their duties will bind the company and will be absolved from any form of liability, however, if such Directors performed acts outside the scope of their authority, then the said Directors will be personally liable for their acts.

e. **Annual general meeting**

An annual general meeting is a statutory meeting that ought to be held within 3 months after the lapse of a financial year.

The annual general meeting covers a wide array of topics to be discussed, chief among them being; the appointment of Directors and their remuneration, the consideration of Directorial and audit reports, declaration of dividends etc.

The Act makes it an offence for a company and any Directors responsible to fail to convene an annual general meeting.

**SOLUTION FIVE**

(a) The legal implications of the decision to ‘delete’ by the auditors are:

Auditors are supposed to audit the accounts of a company and must do the work independently. Should they allow interference from other persons, they will be guilty of misfeasance, and will be liable to make good the amount lost by the company due to their failure to speak their mind. The case of *Re London and General Bank (1895)* is instructive in this regard. Therefore the decision to ‘delete’ means that the auditors will be held liable for any loss the company will incur due to their decision and are guilty of misfeasance (wrongful exercise of power/misuse of power).

Auditors have no duty to detect fraud, but they must investigate and disclose any suspicious accounts, without fear or favour. They must speak their minds.

(b) Methods of reducing capital:

- **Extinguishing or reducing liability on unpaid shares** – This involves the reduction or extinction of shareholders’ liability on unpaid for shares. This in essence reduces the shareholder’s capital in the business as the shares issued to him reduce. For example if shares issued to a shareholder are worth K100 and only K75 has been paid for, the company can reduce his issued capital by extinguishing his liability on the unpaid for K25.

- **Cancelling share capital, which is lost** – This is where a company cancels out any paid up shares due to losses. For example, if a shareholder has fully paid up shares worth K200 and due to losses their real value reduces to K150, the company can cancel out the K50 which represents the actual loss in shares. The lost shares can be cancelled. This reduces one’s shares in the company and reduces the amount of capital held by the company.

- **Paying off paid up share capital, which is in excess of what the company needs** – This done when a shareholder has overpaid on his capital into the company. It acts as a refund. For example a shareholder has a fully paid up capital of K500, but the company only needs K430 for its operations, it can pay back to him the K70. This reduces his capital in the business. This can also be done where part of the company has been sold and the...
excess money on shares is paid off to the existing shareholders. This reduces the amount of capital in the business.

- **Payment in kind** – Capital can be reduced if payment for shares is done in kind as the value of the items given in place of capital may represent a lesser value than actual cash, e.g. receiving a cow instead of K4, 000 capital may reduce the capital as the real value of the cow may K3,800.

(c) The following is the share capital reduction procedure:

- The articles of a company must provide for reduction
- The company will pass a special resolution to reduce its share capital
- The application must be made to the court for an order to allow the reduction within 21 days after its passing. The court will look at how well the interests of creditors have been taken care of.
- After court approval, the special resolution is lodged with the Registrar of Companies within 21 days after it is passed.
- Once this is done, then the reduction is effected

(d) Grounds for winding up by the courts include:

- Inability to pay debts
- Default in holding statutory meetings
- Reduction of members below legal minimum
- When it is just and equitable to do so.
- When the company has by a special resolution decides to be wound up by court.
- When the company fails to begin trading within 12 months of incorporation.
- Expiry of a fixed term company

END OF SOLUTIONS