TAXATION PROGRAMME EXAMINATIONS

DIPLOMA LEVEL

D1: BUSINESS INFORMATION MANAGEMENT

WEDNESDAY 15 JUNE 2016

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. You will be told when to start writing.

2. This question paper consists of **FOUR (4)** questions of Twenty Five (25) marks each. You must attempt all the **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.

Attempt all FOUR (4) questions

QUESTION ONE

(a) Identify six (6) Key Performance Indicators that can be used to measure Critical Success Factors in an organization. (12 marks)

(b) Outline any four (4) infrastructure components that would support E-commerce. (8 marks)

(c) Describe the use of Group Collaboration System in an organization. (5 marks)

[TOTAL: 25 marks]

QUESTION TWO

(a) List four (4) stages that an organization would use to implement an Information Technology plan. (8 marks)

(b) Briefly explain any three (3) Changeover methods of implementing a new system. (12 marks)

(c) Explain Business Process Re-Engineering (BPR). (5 marks)

[TOTAL: 25 marks]

QUESTION THREE

(a) Explain the Quality Assurance activity. (5 marks)

(b) Explain any five (5) characteristics of an effectively planned and implemented quality management system. (10 marks)

(c) Explain any five (5) practical considerations in developing a Quality Control System. (10 marks)

[TOTAL: 25 marks]

QUESTION FOUR

Cable Technology is bringing a new product on line to be manufactured in their current facility in existing space. The owners have identified 11 activities and their precedence relationships.

ACTIVITY	DESCRIPTION	IMMEDIATE PREDECESSOR	DURATION (WEEKS)
A	Develop Specifications	-	4
B	Design Process	A	6
C	Purchase material	A	3
D	Source Tools & Equipment	B	6
E	Install Equipment	D	14
F	Receive Materials	C	5
G	Pilot Production Run	E,F	2
H	Evaluate Product Design	G	2
I	Evaluate Performance	G	3
J	Document Report	H,I	4
K	Transition Phase	J	2

Required:

(a) Develop an Activity on Node (AON) for the Project. (15 marks)

(b) Identify all the possible paths with their durations. (8 marks)

(c) Identify the critical path(s) with its duration. (2 marks)

[TOTAL: 25 marks]

END OF PAPER

JUNE 2016: BUSINESS INFORMATION TECHNOLOGY (D1)

SOLUTIONS

SOLUTION ONE

a) The factors that must be considered in attaining the organisation's goals are called critical success factors (CSFs). Critical success factors, once identified, can be monitored, measured and compared to standards. One or several key performance indicators can measure each CSF. Key performance indicators for typical CSFs include:

(i) **Profitability** - measures for each department, product, region etc. Comparisons among departments, product; comparisons with those of competitors.

(ii) **Financial** - ratios, balance sheet analysis, cash reserve position, rate of return on investment.

(iii) **Marketing** - Market share, advertisement analysis, product pricing, weekly (or daily) sales results, customer sales potential.

(iv) **Human resources** - Turnover rates, skills analysis, absenteeism rate.

(v) **Planning** - Corporate partnership ventures, growth/share analysis

(vi) **Economic analysis** - Market trends, foreign exchange values, industry trends, labour cost trends.

(vii) **Consumer trend**- Consumer confidence level, purchasing habits, demographic data.

b) The infrastructure elements needed to support e-commerce include:

- Internet
- Access networks (LANs, intranets and extranets, Virtual Private Networks)
- Web technology (such as web servers, web software, web-enabled databases and catalogues, webpage design and construction tools, e-commerce transaction processing software, etc.)
- Electronic payments systems.

c) Group Collaboration Systems

These systems allow groups of experts to work together on a common assignment using e-mails, teleconferencing, data conferencing, videoconferencing and groupware. Participants share

knowledge and research findings through groupware, this includes Group decision Support Systems. Group Collaboration may be necessary in projects and research activities where participants are in different locations or cannot sit to work at the same time.

SOLUTION TWO

a) Stages of IT plan

- Establish relationship between the overall organizational business plan and IT plan
- Identify Information requirements for the organization to establish architecture
- Allocate IT applications and operational resources
- Identify IT equipment to use

b) System changeover methods

- Direct changeover: There is direct conversion from an old system to the new one. It's cheap but has a lot of risks
- Parallel changeover: The new and the old systems operate in parallel until the new system is accepted and proven. It is expensive but the most secure.
- Phased in changeover: the new system is introduced in one part of the organization using any other type of changeover, in phases until it is introduced throughout the organization.
- Pilot changeover: The new system is introduced in the organization on a trial basis and used until it is proven.

c) Business Process Re-engineering (BPR)

BPR deploys the use of IT to support the re-engineering of work.

- It involves discovering how business processes currently operate
- How to redesign these processes to eliminate the wasted or redundant effort and improved efficiency
- How to implement the process changes in order to gain competitive advantage.
- The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quantity, service and speed.

SOLUTION THREE

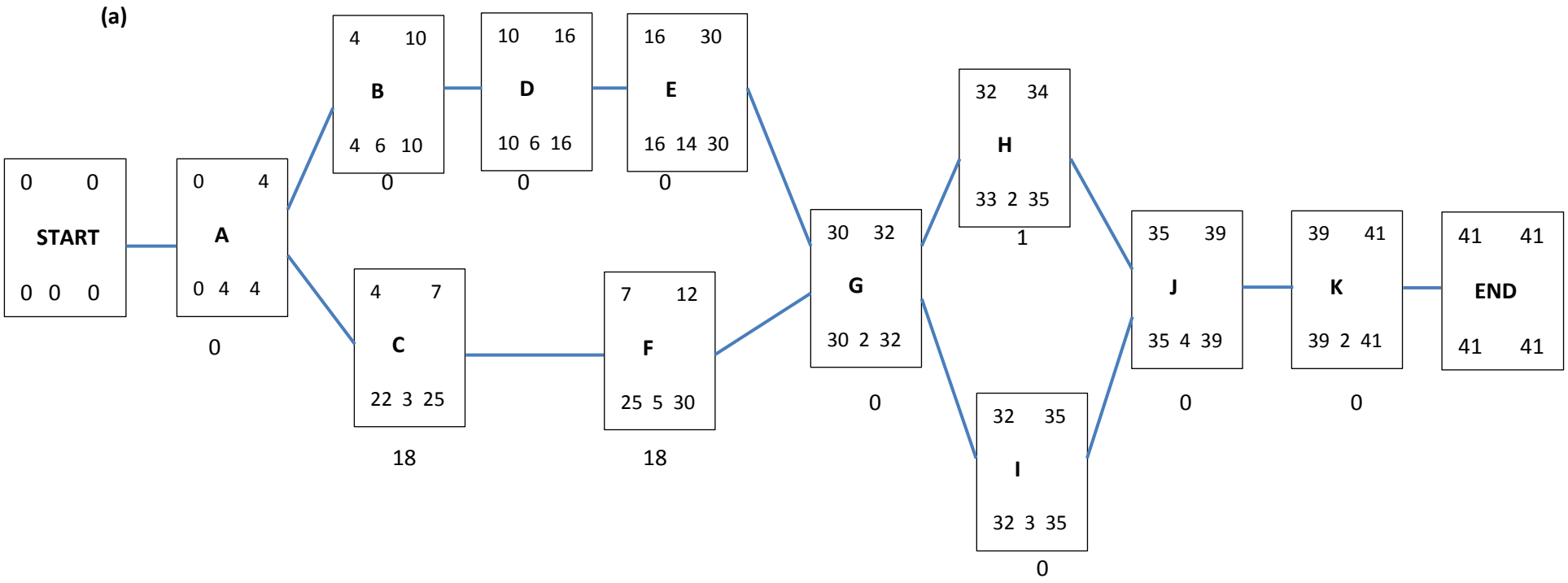
a) Quality Assurance (QA) activities include a planned system of review procedures conducted by personnel not directly involved in the product completion / development process.
   - Reviews preferably by independent third parties, should be performed upon a finalized product following the implementation Quality Control procedures.
   - Reviews verify that data quality objectives are met, to ensure that the product represents the best possible estimates of emissions and sinks given the current state of knowledge and data available and support the effectiveness of quality.

b) Characteristics of an effectively planned and implemented quality management system.
   - Uses feedback information to improve products or services and the process that produce them.
   - Prevents or minimizes quality problems
   - Corrects problems that occur
   - Uses performance measures that identify strengths and weaknesses
   - Impacting the safety and reliability of operations and products.
   - Ability to meet customer requirements.

c) Practical considerations in developing Quality Assurance (QA)/ Quality Control (QC) systems
   - Resources allocated to QC for different sources categories and the compilation process.
   - Time allocated to conduct the checks and reviews of emissions estimates
   - Availability and access to information on activity data and emission factor, including data quality
   - Procedures to ensure confidentiality of inventory and source category information, when required.
   - Frequency of QA/QC checks on different parts of the product.
   - The level of QC appropriate for each source category
   - Whether increased efforts on QC will result in improved emissions estimates and reduced uncertainties
   - Whether sufficient expertise is available to conduct the checks and reviews

SOLUTION FOUR

(a)



- Have a complete diagram from start node to end node
- Have correct ES, EF, LS, LF numbers
- Have correct duration in nodes
- Have slack on each node
- Neat and presentable

(b) Possible Paths

(i) A-B-D-E-G-H-J-K = 40 Weeks
(ii) A-B-D-E-G-I-J-K **=** 41 weeks
(iii) A-C-F-G-H-J-K = 22 weeks
(iv) A-C-F-G-I-J-K = 23 weeks

(c) Critical Path is A-B-D-E-G-I-J-K = 41 weeks

END OF SOLUTIONS