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# **CERTIFIED PUBLIC ACCOUNTANT**

## **FOUNDATION LEVEL 2 EXAMINATIONS**

### **F2.3: INFORMATION SYSTEMS**

**TUESDAY 3 DECEMBER 2013**

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### **INSTRUCTIONS:**

- 1. Time Allowed: 3 hours 15 minutes** (15 minutes reading and 3 hours writing).
- 2. This examination has seven questions and only five questions are to be attempted.**
- 3. Marks allocated to each question are shown at the end of the question.**
- 4. Show all your workings**

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QUESTION ONE

Tactical management level may require the use of Decision Support Systems (DSS) for semi -structured decisions and data modeling.

Required:

- (a)Describe four functional characteristics of Decision Support Systems (DSS). (8 Marks)
- (b)Name four types of accounting information systems which DSS may addre (4Marks)
- c) Organization information systems are categorized under:
  - i) Transaction Processing System (TPS)
  - ii) Management Information Systems (MIS)
  - iii) Decision Support System (DSS)
  - iv) Executive Information System (EIS)
  - v) Expert Systems (ES)

Required:

- Suggest one application of each of the systems types **listed above** for each of the following functional areas of business:
- Sales and marketing. (2 Marks)
  - Finance (2 Marks)
- d) Explain how the use of Information Technology (IT) can bring about improvements in productivity within a business organisation. (4 Marks )
- (Total 20 Marks)

QUESTION TWO

- (a) Explain the meaning of the following terms:
    - (i) Downsizing. (2 Marks)
    - (ii) Cyber-cafe. (2 Marks)
  - b) Giving reasons identify four situations where communication over wireless medium for instance radio and mobile phones may be preferable to over cable. (8 Marks)
  - (c) Select two facilities usually found in fourth generation languages (4GLs) and explain their application in developing a prototype. (4Marks)
  - d) Examine the contribution of information systems in decision-making or problem solving process. (4 Marks)
- (Total 20 Marks)

QUESTION THREE

- (a) The adoption of database systems as a way of managing information systems is gaining popularity over standard file

Required:

- (i) State the features of a database management system that provide data security and integrity. (4 Marks)
  - (ii) What problems are caused by data redundancies? (4 Marks)
  - (iii) Centralized control avoids unnecessary data redundancy or duplication.What precautions should be taken into account -in the process of establishing a centralized data control system to avoid data redundancy? (6 Marks)
- (b) It is important to bear in mind that information may be relevant to people outside the organization as well as to its internal management and employees. Sometimes it happens that some decisions relating to an organization are taken by outsiders. State six examples of decisions relating to an organization that may be taken by outsiders. (6Marks)
- ( Total 20 Marks)

QUESTION FOUR

- (a) Information technology and business environments are rapidly changing such that systems must also keep on evolving in order to keep pace with changes in the environment. In an attempt to upgrade an organization’s system, state the individual members of staff and their corresponding tasks who would be involved with the change. (8 Marks)
  - (b)Outline the main reasons why information technology is viewed as a strategic resource in business organizations. (8 Marks)
  - (c)List four problems encountered when using standard files for data processing systems. (4 Marks)
- (Total: 20 Marks)

QUESTION FIVE

- a) Describe the functional components of a typical computer system. (5 Marks)
- b) Differentiate between the following terms:
  - (i ) Hardware and software; (1 Mark)
  - (ii ) Application software and system software; (1 Mark)
  - (iii ) Bit and byte; (1 Mark)
  - (iv ) RAM and ROM; (1 Mark)
  - (v ) Data and information. (1 Mark)
- c) Describe three major factors that affect the performance of a computer operation. For each factor, state one example of measurement. (6Marks)

d) Examine the issues to be considered when planning for information systems training. (4 Marks)

(Total: 20 Marks)

## QUESTION SIX

a) What is the distinction between system verification and validation? Illustrate your answer with an example in each case. (4 Marks)

b) One way of minimizing errors in input data is to use data coding.

(i) State four characteristics of a good coding system. (4 Marks)

(ii) Describe four commonly used coding systems. (4 Marks)

c) System performance reviews may vary in content from one organization to another but should cover certain key areas. Describe four key areas systems performance reviews should cover. (8 Marks)

(Total: 20 Marks)

## QUESTION SEVEN

(a) Explain three ways in which modern information communication technology (ICT) has affected the portability of information. (6 Marks)

(b) Outline any two anomalies that are associated with redundant data. (2 Marks)

(c) Explain the type of information that should be maintained for the post-implementation review of a system. (6 Marks)

(d) Explain the importance of artificial intelligence (AI) to a developing country. (6 Marks)

(Total: 20 Marks)

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**End of question paper**