THE OPEN UNIVERSITY OF SRI LANKA

DEPARTMENT OF COMPUTER SCIENCE

B.Sc. DEGREE PROGRAMME 2021/2022

FINAL EXAMINATION

CSU5303: MANAGEMENT INFORMATION SYSTEMS

DURATION: TWO HOURS ONLY (2 HOURS)

27ᵗʰ October 2022   **Time: 1.30 p.m. to 3.30 p.m.**

This question paper consists of **six (06)** questions in **three (03) pages.**

Answer **FOUR** questions **only**. All questions carry **equal marks.**

Q1). **There are different types of systems. No single system can provide all the information that an organization needs.**

a) What is an information system?

b) List three (03) dimensions of information systems. Briefly describe two (02) dimensions you have listed.

c) Name three (03) main categories of information systems to serve different management levels? Briefly describe two (02) of them.

d) What are the four (04) specific types of information systems that correspond to each management levels? Briefly describe one (01) of them.

e) Briefly explain why companies, especially larger ones increasingly prefer to use Enterprise Resource Planning (ERP) systems.

Q2). **Typically, the formal organizational unit responsible for information technology services is called the information systems department.**

a) What is an organization? List five (05) common features of organizations.

b) List four (04) essential components of IT infrastructure required to manage information systems.

c) Name five (05) categories of information systems specialists who should be included in an information systems department of a business organization.

d) Describe the functions of the three (03) specialists you mentioned in part c) above.

e) *"Today, the information systems department acts as a powerful change agent in the organization"*. Comment on this statement by providing details such as new information-based products and services.

Q3). Artificial intelligence and database technology provide several intelligent techniques that organizations can use to capture individual and collective knowledge and extend their knowledge base.

a) What is knowledge management? Briefly, describe how it can be incorporated into business processes of a firm.

b) One of the activities of Information Systems relevant to a Knowledge Management is knowledge acquisition. List the other three (03) activities of Information Systems relevant to a Knowledge Management.

c) Briefly describe two (02) of Information System activities mentioned in part b).

d) Briefly explain;
      i.   Expert Systems
      ii.   Case-Based Reasoning
      iii. Fuzzy logic
      iv. Neural Network .
      v.   Intelligent Agent

e) Briefly describe four (04) decision making activities: **intelligence, design, choice,** and **implementation.**

Q4). When System builders design a new information system, they redesign the organization. Therefore, system builders must understand how a system will affect the organization.

a) Briefly describe all the steps involved in a systems development process.

b) Briefly explain, the difference between "traditional life cycle" systems development and " prototyping" with suitable examples.

c) Describe "End-user development" and mention one (01) advantage and one (01) disadvantage of it.

d) Briefly describe the key dimensions of developing international information system architecture for a multinational company.

e) What is an "Application Software Package"? State one (01) advantage and one (01) disadvantage of Application Software Packages.

Q5). Some new business models take advantages of the Internet's rich communication capabilities.

    a) List five (05) internet business models.

    b) Briefly explain three (03) of the models you have identified in above a).

    c) Briefly describe five (05) electronic commerce payment systems for the Internet.

    d) Name (05) Moral dimensions of the information age.

    e) What is intellectual property? *"Copyright is a statutory grant that protects creators of intellectual property"*, comment on this statement.

Q6). Not investing in appropriate security measures will cost a company much more than investing in appropriate security measures.

    a) Define the term "Computer Hacker" and list two (02) types of threats caused by hackers.

    b) List five (05) tools used by Computer Hackers and describe three (03) of them.

    c) List four (04) main classes of controls used to reduce the probability of attack on computer security.

    d) Briefly describe two (02) main classes of controls used to reduce the probability of attack on computer security mentioned in c).

    e) Briefly describe;
        a. Firewalls
        b. Antivirus Software
        c. Encryption