**CHUKA**                                                                    **UNIVERSITY**

## UNIVERSITY EXAMINATIONS

## FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE BACHELOR OF SCIENCE DEGREE IN COMPUTER SCIENCE

**COSC 472:  STRATEGIC INFORMATION SYSTEMS**

**STREAMS:  BSC. COMP. SCI**                                      **TIME: 2 HOURS**

**DAY/DATE:  THURSDAY 25/03/2021**                  **8.30 A.M. – 10.30 A.M**

**INSTRUCTIONS: Answer ALL questions in section A and any other TWO in section B.**

### SECTION A (COMPULSORY - ANSWER ALL QUESTIONS IN THIS SECTION)

### QUESTION ONE: 30 MARKS

a)      Protecting personal information stored in a computer is very essential. Explain measures one  needs to take in order to safeguard his/her personal information.

(4 marks)

b)      Discuss the key similarities and differences between EACH of the following pairs of MIS-related concepts:

i.  Enterprise Resource Planning (ERP) data repository and Data Mart        (2 marks)

ii. Decision Support System (DSS) and Group Decision Support System (GDSS).

(2 marks)

c)      Many organizations are taking up development of management information systems (MIS) to cope with the changing business environment

(i) Analyze five forces that could drive an organization towards implementing management information systems (MIS).                                      (3 marks)

(ii) Evaluate five barriers towards implementation of MIS in an organization.

(3 marks)

d)    Discuss at least three different data gathering techniques.          (3 marks)

e)    Explain different Characteristics of Valuable Information.          (3 marks)


f).    Computer viruses represent a significant threat to the security of organizational computer based information systems. It is estimated that as many as 1700 new computer viruses appear each month. You are required to:

(i)   Provide a definition of the term 'computer virus';          (2 marks)

(ii)  Using relevant examples, describe the ways in which computer viruses can be transmitted;          (3 marks)

(iii) Discuss some of the ways in which organizations can protect against computer viruses. Highlight some of the advantages and disadvantages of each method described.          (5 marks)

## SECTION B: CHOOSE ONLY TWO QUESTIONS FROM THIS SECTION

## QUESTION TWO: 20 MARKS

a)    The information system manager of **TOP SECURITY** ltd has recommended installation of computer network in the company's new offices. The management of the company is not yet convinced on the benefits of the computer network.  Advise the management on six benefits to be derived from installing the network     (6 marks)

b)    Demonstrate how building new systems produces organizational change.    (5 marks)

c)    Describe the factors which make a good or a poor MIS using examples to illustrate your answer          (3 marks)

d)    What is system conversion? Describe the main methods of system conversion.
          (6 marks)

## QUESTION THREE: 20 MARKS

a)    'Enterprise resource planning (ERP) software is likely to replace packages used in a single area of the organization, such as accounting, logistics, production and marketing.' Discuss this statement with reference to the benefits and disadvantages of ERP software          (6 marks)

b)    What is difference between Open and Closed System?          (2 marks)

c)    Explain three management decision-making levels that are supported by Information systems.          (6 marks)

d)     Discuss the activities of the implementation phase of the information systems design
       project                                                                    (6 marks)


**QUESTION FOUR: 20 MARKS**

a)     Describe the characteristics of an effective management information system.(5 marks)

b)     Explain the role of DSS in management of an organization and also describe its
       fundamental components in detail.                                          (7 marks)

c)     You hear a member of the Board of your financial organization, while in discussion
       with major customers, say that "Mobile computing renders all traditional IS/IT
       obsolete".  Discuss and justify the extent to which you agree or disagree with the
       above statement.                                                           (8 marks)


**QUESTION FIVE: 20 MARKS**

a)     A company is considering outsourcing all future MIS application developments.
       Discuss the advantages and disadvantages of outsourcing the Company's future MIS
       application developments, clearly stating within your answer any assumptions you
       make regarding the Company and its operations.                             (7 marks)

b)     Discuss about various phases in SDLC                                       (6 marks)

d)     Discuss three main models of E-commerce                                    (6 marks)

e)     What is information security?                                              (1 mark)


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