JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY-BUSIA LEARNING CENTRE

END SEMESTER EXAMS-DECEMBER 2013

COURSE SCS-203: SYSTEM ANALYSIS AND DESIGN

INSTRUCTIONS:

1. This paper contains five (5) questions.

2. Question ONE is Compulsory and any other TWO questions

3. Answer the questions on the booklet provided

4. Mobile phones are not allowed in the exams room

Question one 30 marks

. (a) Define information system and give examples.   (5mark)

(b)What is the difference between System analysis and system design? Explain.   (5marks)

(c)How would an analyst determine the users' needs for a system? Explain.   (5marks)

(d)Distinguish between initial investigation and feasibility study. In what way are they related?

                                                                                         (5marks)

e) Explain the disadvantages and advantages of structured system analysis and design

methodology   (10 marks)

Question two 20 marks

(a)Name six guidelines required for the development of new information systems (6 Marks)

(b) Explain the meaning of the following terms, bringing out clearly the distinction between the terns in each pair.

- Unit testing and systems testing.   (2 Marks)

- Preventive and perfective maintenance.   (2 Marks)

- Co-processing and parallel processing.   (2 Marks)

- Logical and physical maintenance.   (2 Marks)

(c) Explain the contribution that an information resource center might make towards end-user computing
                                                                                         (6 Marks)

Question three 20 marks

An intruder with the right background and malicious intent has many ways to infiltrate internal company systems and network devices through the Internet connection.

Required:

Describe four Internet security protection mechanisms.   (12 Marks)

(b) Explain the meaning of a digital signature and a virtual private network.   (4 Marks)

(c) Differentiate between reverse engineering and forward engineering.   (4 Marks)

Question four 20 marks

(a)Certain employees will always be placed in positions of trust, for example senior systems analysts, database administrators and information systems security managers. Such employees can therefore, compromise the security of information systems if they so wish.

Required:

(i)Explain three control measures that an organization should institute over these employees and guarantee the security of the information systems. (6 marks)

(ii)Every individual in an organization has some opportunity to commit computer fraud. The potential for which they can do so depends on a number of factors. Examine three of these factors.

(6 marks)

(b) Ethical principals can help in evaluating the potential harms or risks in the use of information communication technology.

Explain ant two principles of technology ethics. (4 marks

(c) Explain the advantages to an organization in having users involved in developing an information systems application (4 marks)

Question five 20 marks

a) Discuss the format of feasibility report (10marks)

(b)What are the various cost benefit categories? (5marks)

 (c)Why it is necessary to conduct cost/benefit analysis (5marks)