TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

EIT 4206: SYSTEMS ANALYSIS AND DESIGN

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2HOURS

DATE: Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. AttemptChoose instruction.

Do not write on the question paper.

Question ONE

a. Differentiate between top down strategy and bottom up strategy as used in system design (4 marks)
b. Using appropriate diagrammatic notations discuss the three rules of constructing a Data Dictionary (6marks)
c. In detail discuss the guidelines for designing a Questionnaire (4marks)
d. Differentiate the following terminologies used in SAD
    1. Preliminary study and feasibility study (4 marks)
    2. Physical design and logical design (4 marks)
e. With a diagrammatic example discuss the elements of a systems (8 marks)

Question TWO

a. During Structured Analysis, various tools and techniques are used for system development. Discuss the following tools stating their impotence to structured analysis
    1. Data Flow Diagrams (4 marks)
    2. Data Dictionary (4 marks)
    3. Decision Trees (4 marks)

4. Decision Tables (4 marks)
5. Pseudocode (4 marks)

Question THREE

a. Using a well labeled diagram explain and illustrate the phases of SDLC (10 marks)
b. Using appropriate examples discuss the following system development methodologies
    1. Structured Design [5 marks]
    2. Rapid Application Development (RAD) [5 marks]

Question FOUR

a. Explain the advantages of a Questionnaire as compared to interviewing (6mks)
b. Outline and explain the major contents of feasibility study report (8 mks)
c. Discuss the following changeover strategies used in the implementation phase of SDLC
    1. Parallel run [3 marks]
    2. Pilot run [3 marks]

Question FIVE

a. Discuss the following phases of system development life cycle (SDLC)
    1. System analysis [4 marks]
    2. System design [4 marks]
    3. Coding [4 marks]
    4. Testing [4 marks]
    5. Maintenance [4 marks]