TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

DICT/JAN2019/S-FT

EIS 2101 SYSTEMS ANALYSIS & DESIGN

END OF SEMESTER EXAMINATION

SERIES:AUGUST2019

TIME:2HOURS

DATE: Pick DateJul2019

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE

a) Explain the following terms as used in systems development   [6marks]

      i. System analysis

     ii. System design

   iii. Requirement specification

b) Provide a description of the following types of systems   [6marks]

      i. Open system

     ii. Closed system

iii. Deterministic system

c) List any four Required Skills of a Systems Analyst   [4marks]

d) Differentiate between white box and black box system testing   [4marks]

QUESTION TWO

a) Assume you are developing an Enrolmentsystem for the following scenario. A student can take many subjects; a subject can be taken by many students. A subject can be taught by many teachers; a teacher can teach only one subject. A student can be taught by many teachers; a teacher can teach many students. Design an ERD that models the association and cardinalities between the various entities in the scenario.   [10marks]

b) List and explain any four objectives of input form design   [8marks]

c) Highlight any two causes of system failure   [2marks]

QUESTION THREE

a) TUM wants to implement a new system called TUM MIS to replace an old one. Explain any four approaches for system changeovers that can be used.   [12 marks]

b) Explain any three importance of system documentation   [6marks]

c) List any two strategies that can be used to avoid user resistance to change of a new system.   [2marks]

QUESTION FOUR

a) Briefly describe the waterfall method of systems development and explain why this method is less popular now than it used to be.   [10 marks]

b) Explain the use of a Gantt chart in systems feasibility study   [2marks]

c) List and explain any four objectives of output design in system development [8marks]

QUESTION FIVE

a) In a typical ATM system, a customer uses his/her ATM card to either withdraw or deposit cash from his/her account. The ATM card has the account name, account number

and upon use, a PIN number has to be given for security reasons. When a customer wants to deposit money, the system gives the customer a cash envelope of which he/she uses to insert the money into the ATM system.

    i)   Draw a 0 level Context diagram for the above scenario   [4 marks]

    ii) Draw a DFD diagram for the above activities   [8marks]

b) Explain any four types of system maintenance   [8marks]