



THE TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY
DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY
(DICT 12S-EV)

EIS 2101: SYSTEMS ANALYSIS & DESIGN

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

- a) List the components of an information system. **(2 marks)**
- b) State **FOUR** characteristics of information systems? **(2 marks)**
- c) How does use of information system provide a competitive advantage to an organization? **(4 marks)**
- d) State the deliverables of each of the following SDLC stages. **(4 marks)**
 - (i) Problem definition
 - (ii) Feasibility analysis
 - (iii) System design
 - (iv) System implementation
- e) A warehouse operates a mail order business customers send orders stock and credit are checked and the goods dispatched to the customer. Construct a context diagram for the above description. **(4 marks)**
- f) Briefly explain any **TWO** roles of a system analyst. **(4 marks)**

Question Two

- a) Using suitable sketches, explain the components of data flow diagrams. **(4 marks)**
- b) Briefly explain any **THREE** techniques for gathering facts. **(6 marks)**
- c) Describe any **THREE** levels of organizational information for management. **(6 marks)**
- d) State any **FOUR** examples of transaction processing system (TPS) **(4 marks)**

Question Three

- a) Explain the terms coupling and cohesion and state why they are desirable features in software design. **(5 marks)**
- b) Explain any **FOUR** features of user-interface design in system development. **(6 marks)**
- c) Discuss the importance of systems analysis and design in the development of a system. **(6 marks)**
- d) Outline any **THREE** conversion strategies used during system implementation. **(3 marks)**

Question Four

- a) Briefly explain the **THREE** views of data in SSADM. **(3 marks)**
- b) Explain the importance of system maintenance. **(3 marks)**
- c) MOBITEK Company has one Chief Executive Officer. The company has several sections each of which employs several people. No employee works for more than one section. Each of the product of a section may be made out of one or more raw materials. Any raw material may go into more products. Construct an LDS for the above information. **(14 marks)**

Question Five

- a) Explain any **FOUR** activities carried out during system implementation. **(4 marks)**
- b) Explain any **THREE** qualities that a system analyst should possess. **(6 marks)**
- c) What motivates for change of a system. **(2 marks)**
- d) TUM would like to develop a student portal which will be used as an online means of communication between the students and staff. As a system analyst, advise TUM on the steps to be taken to come up with a user-friendly system. **(8 marks)**