



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR BACHELOR OF TECHNOLOGY IN
INFORMATION COMMUNICATION TECHNOLOGY
(BTICT)

EIT 4206: SYSTEM ANALYSIS & DESIGN

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

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) Describe the following terms:

(i) System

(ii) System design

(iii) Feed forward

(6 marks)

b) State **THREE** weaknesses of system development life cycle

(3 marks)

c) Briefly explain the following types of information systems

(i) TPS

(ii) DSS

(iii) MIS

(6 marks)

- d) Briefly explain the importance of requirements analysis (3 marks)
- e) Briefly describe **FOUR** reasons for system request (4 marks)
- f) Define the term “Methodology” (2 marks)
- g) Explain the importance of structured charts. (2 marks)
- h) Briefly explain **FOUR** qualities of a good system. (4 marks)

Question Two

- a) Briefly describe **FOUR** characteristics of a system. (2 marks)
- b) Explain the following methodologies (8 marks)
 - (i) RAD
 - (ii) CASE
- c) Draw a use-case diagram for a college that would like to keep track of each graduate. In order to maintain strong ties to its alumni, the college holds various events. The college needs to keep track of which graduates have attended which events. The college keeps in contact with graduates by mail, email, telephone and fax to announce such event and keep announce such event and keep graduate information up-to-date. The college and the events the graduate attended. (6 marks)
- d) Briefly describe **FOUR** characteristics of all methodologies (4 marks)

Question Three

- a) Distinguish between logical design and physical design (4 marks)
- b) Define the term “prototype” (2 marks)
- c) Describe **TWO** benefits and limitations of use case diagrams. (4 marks)
- d) Describe the **THREE** types of maintenance which are commonly encountered in computer based systems. (6 marks)
- e) State **FOUR** primary reasons why systems fail. (2 marks)
- f) Explain **FOUR** reasons why systems should be maintained. (2 marks)

Question Four

- a) When an invoice is received from a supplier, it is checked against a file of authorized purchaser. If the invoice does not match an authorized purchase, does not match an authorized purchase, then it is returned to the supplier witz a querying letter. If the invoice matches an authorized purchase, but it for an incorrect amount then it is returned to the supplier with a standard form. If the invoice reconciler, a payment authorization is made out. A cheque is then sent to the supplier and the invoice and the authorization are filed.
Draw an DFD for the above system. (10 marks)
- b) Describe **FOUR** skills that a system analyst should have. (4 marks)
- c) Explain at least **THREE** major activities carried out during system implementation. (6marks)

Question Five

- a) Describe the purpose of post implementation system review **(4 marks)**
- b) Outline the stages of structuring system methodology (SSM) **(6 marks)**
- c) Explain the importance of system study **(4 marks)**
- d) Explain the following system concepts:
 - (i) Equifinality
 - (ii) Entropy
 - (iii) Symbiosis **(6 marks)**