



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

*Faculty of Engineering & Technology*

DEPARTMENT COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DICT 11M, DICT 2K 11M, DIT 11M, DIT 2K 11M

**EIT 2106/ECT 2108: SYSTEMS ANALYSIS & DESIGN**

END OF SEMESTER EXAMINATIONS

**SERIES: DECEMBER 2011**

**TIME: 2 HOURS**

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions.

Answer question any **THREE** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

### QUESTION 1 (20 MARKS)

- a) Explain the term “feasibility study” (2 marks)
- b) Discuss the contents of a feasibility study report (8 marks)
- c) A company has invested in a system at a cost of 300,00. The details of the Operational costs and benefits for a five year period is shown below.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Cost	300,000	20,000	21,000	23,000	32,000	34,000
Benefit	0	100,000	150,000	200,000	230,000	250,000

Assuming a discounting rate of 12% per annum,

Determine

- i. NPV
- ii. PAYBACK Period
- iii. Project viability (10 marks)

### QUESTION 2 (20 MARKS)

- (a) Explain the fact-finding methods (12 Marks)
- (b) State **one** advantage and one disadvantage of each of the methods above. (8 Marks)

### QUESTION 3 (20 MARKS)

- a) Explain the stages of the system development life cycle (14 Marks)
- b) State the principles of the system development life cycle. (6 Marks)

### QUESTION 4 (20 MARKS)

- a) Define a decision table (2 Marks)
- b) The following employment selection criterion was applied to candidates applying for a certain job. Candidates are accepted for employment if their qualifications and references are satisfactory and they pass the interview. Where a candidate’s reference or the interview (but not both) are unsatisfactory, a job for a probationary period is offered. In all other circumstances the candidates application is rejected. Construct a full limited entry decision table and reduce it appropriately. (18 Marks)

### QUESTION 5 (20 MARKS)

- a) Define “System changeover”. (4 Marks)
- b) Explain the different changeover methods giving one advantage and one disadvantage. (16 marks)