



MACHAKOS UNIVERSITY

University Examinations 2022/2023

SCHOOL OF ENGINEERING & TECHNOLOGY- TVET

**SECOND YEAR FIRST TERM EXAMINATION FOR
DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY
MODULE II
SYSTEM ANALYSIS AND DESIGN**

DATE: 27/3/2023

TIME: 8:30 – 11:30 AM

INSTRUCTIONS TO THE CANDIDATES:

1. You should have the following for this examination:-
 - Answer booklet
2. *Answer five of the six questions in this question paper.*
3. Do not write on this question paper

This paper consists of two printed pages

Candidates should check the question paper to ensure that all the pages are printed as indicated and that no questions are missing

QUESTION ONE

- a. Explain the meaning of *ICT Project management* as used in System Analysis and Design. (3 marks)
- b. Define each of the following terms as used in System Analysis and Design.
 - i. *System Acquisition* (2 marks)
 - ii. *Project management* (2 marks)
 - iii. *System testing* (2 marks)
- c. Distinguish between *Artificial* and *Probabilistic* systems citing an example in each case. (6 marks)

QUESTION TWO

- a. Outline *five* types of feasibility study that should be carried out by a systems developer. (5 marks)
- b. Explain *three* methods that can be used when implementing a new system in an organization. (6 marks)
- c. Define the term *system* as used in Information Technology. (2 marks)
- d. Define *decision tables* as used in System Analysis and Design. (2 marks)

QUESTION THREE

- a. Define the term *feasibility study* as used in systems development. (2 marks)
- b. Explain *four* advantages of Agile Software development approach as used in systems development. (8 marks)
- c. Citing examples, define the term *stakeholder* as used in System Analysis and Development. (3 marks)
- d. Outline *two* possible ways of coping with emerging trends in System Analysis and Design as experienced in the world today. (2 marks)

QUESTION FOUR

- a. Describe the main steps in the system prototyping cycle. (6 marks)
- b. Outline any three characteristics of a computerized system. (3 marks)
- c. Discuss any three types of system maintenance used in SAD. (6 marks)

QUESTION FIVE

- a. Explain any five reasons that may lead to Information System project failure. (10 marks)
- b. Explain any five possible signs of a failing ICT project. (5 marks)

QUESTION SIX

- a. Explain *incremental* and *Big bang* models of system development. (6 marks)
- b. Outline *four* ICT project management tools (4 marks)
- c. Outline five fact finding techniques in systems development. (5 marks)