



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

DIRECTORATE OF TVET

SECOND YEAR FIRST TERM EXAMINATION FOR
DIPLOMA IN INFORMATION AND COMMUNICATION SYSTEM

SYSTEM ANALYSIS AND DESIGN

DATE: 25/7/2022

TIME: 8.30-11.30 AM

INSTRUCTIONS

1. You should have the following for this examination:-
 - Answer booklet
2. *Answer four of the six questions in this question paper.*
3. All the questions carry twenty marks
4. Do not write on this question paper

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)
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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)