



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

DIPLOMA INFORMATION COMMUNICATION TECHNOLOGY

DIT 109: SYSTEMS ANALYSIS AND DESIGN

DATE: 3/5/2019

TIME: 8.30-10.30 AM

INSTRUCTIONS

Answer **question ONE** and any other **TWO** questions.

QUESTION ONE (30 MARKS)

- a) Explain the meaning of ICT Project management as used in System Analysis and Design. (2 marks)
- b) Define each of the following terms as used in System Analysis and Design.
 - i. System Analysis (2 marks)
 - ii. System Design (2 marks)
 - iii. System Acquisition (2 marks)
 - iv. Project management (2 marks)
 - v. System testing (2 marks)
- c) Distinguish between Artificial and Probabilistic systems citing an example in each case. (6 marks)
- d) Explain incremental and Big bang models of system development. (6 marks)
- e) Outline four ICT project management tools (4 marks)
- f) Outline four fact finding techniques in systems development. (4 marks)

QUESTION TWO (20 MARKS)

- a) Explain four types of feasibility study that should be carried out by a systems developer. (8 marks)
- b) Discuss four methods that can be used when implementing a new system in an organization. (8 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 (20 MARKS)

- 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. (4 marks)
- d) Explain three possible ways of coping with emerging trends in System Analysis and Design as experienced in the world today. (6 marks)

QUESTION FOUR (20 MARKS)

- a) Describe the main steps in the system prototyping cycle. (6 marks)
- b) Outline four characteristics of a computerized system. (4 marks)
- c) Discuss three types of system maintenance used in SAD. (6 marks)
- d) Documentation is a very vital exercise in system development.
- i. Define system documentation (2 marks)
 - ii. Outline two benefits of system documentation. (2 marks)

QUESTION FIVE (20 MARKS)

- a) Explain the role of the following system stake holders in system development.
- i. Systems owners (2 marks)
 - ii. Systems users (2 marks)
 - iii. Systems analyst (2 marks)
- b) Explain five reasons that may lead to Information System project failure. (10 marks)
- c) Explain four possible signs of a failing ICT project. (4 marks)