



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 IN INFORMATION AND COMMUNICATION TECHNOLOGY

SYSTEM ANALYSIS AND DESIGN

DATE: 18/4/2019

TIME: 8.30-11.30 AM

INSTRUCTIONS

1. Answer four of the six questions in this question paper.
2. All the questions carry twenty marks

QUESTION ONE (20 MARKS)

- 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 (20 MARKS)

- 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 (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. (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 (20 MARKS)

- 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 (20 MARKS)

- 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 (20 MARKS)

- 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)