



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

SIT 207: SOFTWARE ENGINEERING

DATE: 25/3/2021

TIME: 8.30-10.30 AM

INSTRUCTION: Answer Question ONE and any other TWO Question

QUESTION ONE (30 MARKS) [COMPULSORY]

- a) Differentiate between the following
 - i. Computer Science and Computer Engineering (4 marks)
 - ii. Validation and Debugging (4 marks)
- b) Explain any two software quality planning activities (4 marks)
- c) State and explain three advantages of a network diagram in project management. (6 marks)
- d) Explain two types of prototyping techniques (4 marks)
- a) When implementing systems, you have choices of methods. Under what circumstances or situations would you consider a direct method to be preferred over a parallel method? (4 marks)
- e) State two stages of SDLC. (2 marks)

QUESTION TWO (20 MARKS)

- a) Define a software process model (2 marks)
 - i. List any four software development process models (4 marks)
 - ii. Discuss the fundamental activities in configuration management. (8 marks)
- b) Explain the following terms as used in software configuration management (4 marks)
 - i). Baselines
 - ii). Software configuration Item
- c) Explain quality assurance in software development (2 marks)

QUESTION THREE (20 MARKS)

- a) Discuss all activities carried out during project planning for software development. (10 marks)
- b) Mark wants to confirm that he has procured the best software for the tasks defined in his business. Explain five activities he can use for this purpose. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss five kinds of tools that can be used in project management (10 marks)
- b) Jack has been tasked with carrying out software maintenance for a client on behalf of his company/employer. Discuss five steps he is supposed to follow to professionally carry out this task. (10 marks)

QUESTION FIVE (20 MARKS)

- a) Using a well labelled diagram, discuss how a network diagram can be used to schedule the activities of a project. You can use a specific case study and duration of 6 months. (10 marks)
- b) Discuss five categories of errors that can be handled during software quality assurance. (10 marks)