MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR SECOND SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 207: SOFTWARE ENGINEERING

DATE: 2/5/2019 **TIME: 2.00-4.00 PM**

INSTRUCTIONS

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

QUESTION ONE (30 MARKS) (COMPULSORY)

a) Differentiate between the following

i. Software Engineering and System Engineering (4 marks)

ii. Validation and verification (4 marks)

b) Explain any two software quality assurance group activities (4 marks)

c) State and explain three advantages of configuration 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 parallel method to be preferred over a phased method? (4 marks)

e) State two stages in project management. (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 the software development life cycle (8 marks)

b) Explain the following terms as used in software configuration management (4 marks)

i. Baselines

ii. Software configuration Item

c) Explain quality of software in software development (2 marks)

QUESTION THREE (20 MARKS)

a) Discuss all activities carried out during requirement gathering and analysis for software development. (10 marks)

b) Mark wants to confirm that he has procured the best software for the tasks defined in his business. Discuss five measurable qualities he can use for this purpose. (10 marks)

QUESTION FOUR (20 MARKS)

a) Discuss five kinds of project plans 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 Gantt chart 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)