



MACHAKOS UNIVERSITY

University Examinations for 2022/2023

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR

BACHELOR OF SCIENCE (COMPUTER SCIENCE)

SCO302: SOFTWARE PROJECT MANAGEMENT

DATE:

TIME:

INSTRUCTIONS:

Attempt Question One and Any Other Two questions in this paper

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Distinguish between program and portfolio as used in project management (4 marks)
- b) State THREE applications that can be used to manage projects. (3 marks)
- c) Discuss project quality management in the context of Computer Science Projects. (6 marks)
- d) Internal human resource plays a key role in the success of projects. However, sometimes project managers prefer to outsource personnel and tools to ensure the success of the project. Explain THREE circumstances under which this happens. (6 marks)
- e) Consider a project to develop an enterprise resource planning system whose main activities have been identified and coded as follows: -

Activity	Preceding Activity	Activity Duration (days)
A	-	5
B	-	6
C	A	4
D	A	5
E	B	2
F	B	5
G	C, E	4
H	C, E, F	6

- i. Design a well labeled GANTT chart for the above project. (8 marks)
- ii. Determine the critical path. (3 marks)

QUESTION TWO (20 MARKS)

- a) Analyze the triple constraint of project management. Use a well labelled diagram to illustrate the concept. (8 marks)
- b) Explain three reasons why most high level projects like construction of the Standard Gauge Railway and the Nairobi Expressway have been awarded to non-locals. (6 marks)
- c) Explain three projects in the field of computer science that can be embedded on the Nairobi Expressway project. (6 marks)

QUESTION THREE (20 marks)

- a) Explain why a PERT chart is preferred to a GANTT chart in project planning. (6 marks)
- b) Explain three elements of organizational strategic management that apply to project management. (6 marks)
- c) Discuss procurement management as a knowledge area in project management. (8 marks)

QUESTION FOUR (20 MARKS)

- a. Define risk management (2 marks)
- b. Discuss four steps involved in risk management as applied in project management. (8 marks)
- b. Explain THREE qualities of a project manager. (6 marks)
- c. State FOUR reasons why a project may fail. (4 marks)

QUESTION FIVE (20 MARKS)

- a. Explain FOUR roles of the project team in project management. (8 marks)
- b. Discuss three stakeholders in an IT project. (6 marks)
- c. You are part of the team undertaking a project to implement an ERP system at the Kenya Prisons Service. Explain THREE reasons why it would be important for you to understand the strategic plan for Kenya Prisons. (6 marks)