



W1-2-60-1-6  
**JOMO KENYATTA UNIVERSITY**  
**OF**  
**AGRICULTURE AND TECHNOLOGY**  
University Examinations 2018/2019

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
LAND RESOURCES PLANNING AND MANAGEMENT  
A.P. 2405: PROJECT PLANNING AND MANAGEMENT

**DATE: DECEMBER 2018**

**TIME: 2 HOURS**

**INSTRUCTIONS:**

Answer Question 1 and ANY OTHER TWO questions.

1. (a) Discuss the various types of production operations that an organisation can adopt to achieve its objectives, and give examples of each. (5 marks)
- (b) Highlight the various key characteristics that define a project. (5 marks)
- (c) Discuss the term 'project management' and indicate various situations that warrant its use. (6 marks)
- (d) Discuss the potential benefits and challenges of project management. (8 marks)
- (e) Briefly discuss the importance of monitoring and evaluation and discuss one method used to monitor and control a project. (6 marks)
  
2. (a) Discuss the concept of a project manager and indicate the primary roles and attributes associated with this responsibility. (6 marks)
- (b) Discuss the organisational structure of a traditional organisation and indicate its various advantages and disadvantages. (6 marks)
- (c) Briefly discuss the main characteristics of an executive project management structure and indicate its various benefits and challenges. (8 marks)

3. (a) Discuss various functions of the project planning process and indicate its aims and objectives. (6 marks)
- (b) Briefly discuss the main stages involved in developing a draft master schedule (DMS) from an initial statement of works (ISOW). (6 marks)
- (c) From the data given of a single series of activities with basic, optimistic, likely and pessimistic times, determine the project mean completion time and calculate the probability that the project will be completed in 21 days. (3 marks)

| Activity | Optimistic | Likely | Pessimistic |
|----------|------------|--------|-------------|
| A-B      | 1          | 2      | 3           |
| B-C      | 3          | 5      | 7           |
| B-D      | 2          | 4      | 8           |
| C-E      | 3          | 4      | 8           |
| C-F      | 1          | 5      | 7           |
| D-F      | 4          | 6      | 9           |
| E-F      | 6          | 8      | 12          |
| E-G      | 1          | 2      | 3           |

4. (a) Discuss the main differences between Critical path method (CPM) and the program evaluation and review technique (PERT) as used in project management. (6 marks)
- (b) Briefly discuss the various alternatives available to a project manager to re-plan a project when its completion duration is unacceptable to the client. (6 marks)
- (c) Discuss the main points involved in a typical crash curve, and calculate the cost needed for the following project to be crashed to its maximum time period from the data given. (3 marks)

| Activity | Normal duration | Crash duration | Normal cost | Crash cost |
|----------|-----------------|----------------|-------------|------------|
| A-B      | 19              | 14             | 250,000     | 375,000    |
| B-C      | 3               | 2              | 20,000      | 40,000     |
| C-D      | 4               | 3              | 30,000      | 35,000     |
| D-E      | 5               | 4              | 100,000     | 110,000    |