



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY  
(MMUST)**

**UNIVERSITY REGULAR EXAMINATIONS**

**2022/2023 ACADEMIC YEAR**

**FOURTH YEAR FIRST SEMESTER EXAMS**

**FOR THE DEGREE OF**

**BACHELOR OF INFORMATION SYSTEMS AND KNOWLEDGE  
MANAGEMENT**

**COURSE CODE: BIK 312**

**COURSE TITLE: INFORMATION SYSTEMS PROJECT MANAGEMENT**

**DATE: 05/12/2022**

**TIME: 08:00-10:00AM**

---

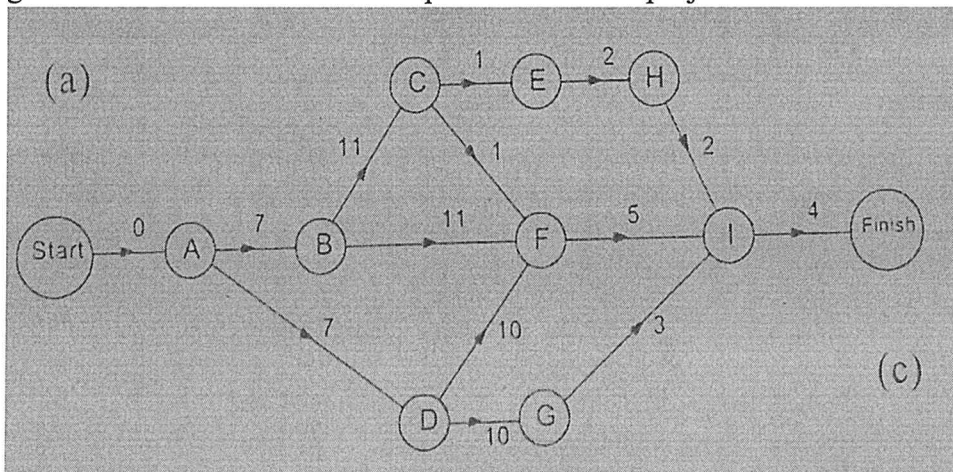
**INSTRUCTIONS: Please attempt QUESTION ONE and any OTHER TWO QUESTIONS**

**MMUST observes ZERO tolerance to examination cheating**

**Paper Consists of 3 Printed Pages. Please Turn Over**

## QUESTION ONE

- a) Distinguish between the following project management concepts (12mks)
  - i) Project management and business management
  - ii) Activity-On-Arc And Activity-On-Node
  - iii) Milestone and critical path
  - iv) Intrinsic and Extrinsic Motivation
- b) Risk is a measure of the probability and consequence of not achieving a defined project goal. Therefore, Risk management is an important aspect in project management.
  - i) Distinguish between proactive and reactive risk management (4mks)
  - ii) Describe any **TWO** project risk factors familiar to you (6mks)
- c) The figure below is a CPM network representation of a project.



- i) Outline the critical activities (3mks)
- ii) What is the earliest completion time for the project (2mks)
- iii) Outline the possible paths (3mks)

## Question two

A dependency or relationship pertains to the sequencing of project activities or tasks.

- d) Distinguish Between a milestone chart and an Gantt chart (4mks)
- e) Describe the three types of dependencies (6mks)
- f) Outline the steps of making a Gantt chart (4mks)
- g) Compare the PERT and CPM (6mks)

## Question three

The work breakdown structure (WBS) is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables.

- h) Using your 3<sup>rd</sup> year project as an example, outline the activities you would undertake from the start to the end (4mks)

- i) Represent the activities in Q3(a) above using a WBS (8mks)
- j) Assuming that the project will last a whole academic year (from September 2022 to end of April 2023), represent the project activities in a Gantt chart (8mks)

**Question four**

Human resources play a major role in the failure or success of a project. Therefore, the process of recruitment and management is critical.

- k) Distinguish between functional structure and organization structure (3mks)
- l) Using a suitable illustration, explain Maslow’s hierarchy of needs (10mks)
- m) As a project manager, explain how you would use McGregor’s Theory X and Y to manage your project team (7mks)

**Question five (20 MARKS)**

Estimating the time a project will take is a critical factor in controlling systems development projects. Some of the tools available for a project manager include Critical Path Analysis (CPA) which is a network diagramming technique used to predict total project duration

- n) Distinguish between Milestones and critical activities [4mks]
- o) Consider the activities in the table below:

Activity	description	Duration (wks)
A	Prepare foundation	7
B	Make and position door frame	2
C	Lay drains, floor base, screed	15
D	Install services and fittings	8
E	Erect walls	10
F	Plaster ceiling	2
G	Erect roof	5
H	Install doors and windows	8
I	Fit gutters and pipes	2
J	Paint outside	3

The following is the order of precedence: activity D must follow E, E must follow A and B, F must follow D and G, G must follow E, H must follow G, I must follow C and F, and J must follow I.

- i) Draw a well labelled activity network to show how the project will progress from start to end [6mks]
- ii) What is the total time required to complete the project if no delays occur? [2mks]
- iii) Which are the critical activities where any delays must be avoided to prevent delaying project completion? [2mks]
- iv) What is the earliest start time for the activities on the critical path [3mks]
- v) What path has the shortest completion time [3mks]