INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: BIT
YEAR/SEM: YEAR 3/SEMESTER 1
COURSE CODE: BIT3104
NAME: PROJECT PLANNING AND MANAGEMENT

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Attempt all questions

Question 1:

You are a project manager tasked with organizing a community clean-up initiative in your local neighborhood. The goal of the project is to improve the cleanliness and environmental health of the area by mobilizing volunteers to collect litter, plant trees, and promote recycling awareness. The project is expected to run for three months, with a budget of 40,000,000. Key stakeholders include the local government, community leaders, volunteers, and environmental organizations.

Instructions:
Draft a project charter document for this initiative. Your charter should include the following sections:

i. Project Title. **(2 marks)**
ii. Project Purpose/Justification. **(5 marks)**
iii. Objectives. **(5 marks)**
iv. Key Deliverables. **(5 marks)**
v. Stakeholders. **(5 marks)**
vi. High-Level Timeline. **(5 marks)**
vii. Budget Overview. **(5 marks)**
viii. Assumptions and Constraints. (5 marks)
ix. Approval Section. **(3 marks)**

Question 2:

You have been assigned as the project manager for a school library renovation project. The goal is to modernize the library by updating its facilities, adding new technology (e.g., computers, e-book readers), and creating a more student-friendly environment. The project has a budget of 25,000,000 and must be completed within six months. Key stakeholders include the school administration, teachers, students,

parents, and a local construction company.

Instructions:
Draft a project charter document for this renovation project. Your charter should include the following sections:

i. Project Title. **(2 marks)**
ii. Project Purpose/Justification. **(5 marks)**
iii. Objectives. **(5 marks)**
iv. Key Deliverables. **(5 marks)**
v. Stakeholders. **(5 marks)**
vi. High-Level Timeline. **(5 marks)**
vii. Budget Overview. **(5 marks)**
viii. Assumptions and Constraints. (5 marks)
ix. Approval Section. **(3 marks)**

SECTION B

Attempt any 3 questions

Question 1:

a) Define the term project
(2 marks)

b) Describe any 3 examples of IT projects that you can point out
(6 marks)

c) Define the concept of the 'triple constraint' in project management and discuss how it influences decision-making throughout the project lifecycle. Provide examples to support your explanation.
(12 marks)

Question 2:

a) Define project cost management and discuss why it is a critical aspect of project success.
(4 Marks)

b) Give any 4 types of costs that can be incurred in a project giving an example of each
(8 marks)

c) Define cost estimation in the context of project management.
(2 marks)

d) Project managers must take cost estimates seriously if they want to complete projects within budget constraints. Explain the 3 types of cost estimates **(6 marks)**

Question 3:

a) Define human resource management (HRM) in the context of project management.
(2 Marks)

b) Explain two key reasons why effective human resource management is critical to project success.

(4 Marks)

c) Discuss the four main processes involved in Project Human Resource Management.

(4 Marks)

d) Maslow developed a hierarchy of needs which states that people's behaviours are guided or motivated by a sequence of needs. Describe four needs in relation to project management

(8 marks)

e) Explain the importance of a responsibility assignment matrix (RAM) in project human resource management

(2 marks)

Question 4:

a) Define scope

(2 Marks)

b) Describe the key stages of the scope management process, from initiation to closure.

(6 Marks)

c) You are the project manager for a new mobile app development project. The app will include features such as user registration, a payment gateway, a search function, and a dashboard. The project sponsor has asked you to create a Work Breakdown Structure (WBS) to organize the work and ensure all deliverables are clearly defined.

i. Create a WBS for this project, breaking it down into at least two levels (e.g., Level 1: Major deliverables, Level 2: Sub-components or tasks). **(10 Marks)**

ii. Explain how the WBS will help the team manage the project more effectively.

(2 Marks)

Question 5:

a) Define project scheduling and explain its purpose in project management. **(4 marks)**

b) Study the table below and do the following:

Task	Duration	Predecessor
A	3	-
B	5	A
C	7	A
D	10	B
E	5	C
F	5	D,E

i. Prepare a project network diagram
(8 marks)

ii. List the critical path activities and project duration
(2 marks)

iii. With a help of a bar graph, draw a Gantt chart
(6 marks)

Question 6:

a) Define the term ‘program’ in the context of project management.
(2 marks)

b) Explain two key benefits of managing related projects as a program rather than individually.
(4 marks)

c) Differentiate between a program and project manager
(2 marks)

d) Point out any 4 attributes of a project
(4 marks)

e) Give any four Important Skills and Competencies for Project Managers **(4 marks)**

f) Explain why top management commitment is critical to the success of a project or organizational initiative
(4 marks)

Question 7:

a) Project Integration Management involves coordinating all other knowledge areas throughout a project's life cycle. Identify and describe the main processes included in Project Integration Management. (6 marks)

b) Scrum requires active participation from all team members. Explain the roles of the Product Owner, Scrum Master, and Development Team in ensuring the success of a Scrum project. How do these roles collaborate to achieve project goals? (8 marks)

c) Define Resource Loading and Resource Leveling in the context of project management. Provide a scenario where Resource Leveling is applied, explaining how it helps in balancing resource allocation throughout the project lifecycle. (6 marks)

Question 8:

a. List three critical factors that contribute to the success of a project

and briefly explain how each factor helps achieve project objectives.

(6 marks)

b. A company is undergoing a major restructuring to improve efficiency. The changes include redesigning roles, introducing new technology, and addressing employee concerns.

i. Analyse how the structural perspective, symbolic perspective and the human resource perspective would approach this restructuring differently. **(9 marks)**

ii. Discuss how the political perspective might explain resistance to the changes and suggest strategies to address it. **(5 marks)**

Question 9:

A project team is working on a complex IT infrastructure upgrade. The team consists of members from different departments, including IT, finance, and operations. The project manager has noticed misunderstandings, missed deadlines, and frustration among team members due to poor communication.

a) Explain how improving communication could address these issues and enhance team performance.

(3 marks)

a) Why would you as a project manager encourage more face to face communication

(2 marks)

b) Explain any 3 classifications for Communication Methods

(6 marks)

c) Calculate the number of communication channels for a project team with 6 members.

(4 marks)

d) List three key elements of effective communication in project

management. (3 marks)

e) Recommend two practical solutions the project manager could implement to improve communication efficiency.
(2 marks)

Question 10:

a) Briefly explain the purpose of the planning phase in the project life cycle. **(4 marks)**

b) You are managing a project to build a new community park. The project involves construction, landscaping, and community engagement activities.

i. Explain why it is important to identify and engage stakeholders early in a project.
(4 marks)

ii. Identify four key stakeholders for this project and explain their roles or interests.
(8 marks)

iii. Describe two challenges that may arise when managing stakeholder expectations and suggest strategies to address these challenges. **(4 marks)**

Question 11:

a) Describe the key features of a project-based organizational structure and how it differs from a functional structure.
(5 marks)

b) Explain how the project-based structure could improve the firm's ability to deliver client projects on time and within budget.
(4 marks)

c) Discuss two advantages and two disadvantages of the matrix structure
(4 marks)

d) List the **four main processes** involved in project cost management. **(4 marks)**

e) Explain the Earned Value Management (EVM) technique in regards to controlling costs during projects
(3 Marks)

Question 12:

a) Define the term project life cycle and list its four main phases.
(5 marks)

b) A healthcare organization is implementing a new patient management system to streamline operations and improve patient care. The project involves changes to business processes, staff roles, and IT systems.

i. Explain how the Three Sphere (business, organization, or technology) Model can guide the implementation of this system **(12 marks)**

ii. Discuss the potential risks of ignoring one or all of the spheres during implementation.
(3 marks)