SOROTI UNIVERSITY

School of Engineering and Technology

MGT4104: Engineering Project Planning and Management

Continuous Assessment Test 2

Thursday, 14th November 2024

Duration: 1 hour and 15 minutes

Instruction: Answer any **TWO (2)** questions of your choice.

QUESTION ONE

a) List the types of project scope. **[3 marks]**

b) Describe the processes included in project scope management. **[6 marks]**

c) With aid of examples from a project of your choice, describe **TWO (2)** types of scheduling relationships between activities in the Precedence Diagramming Method. **[4 marks]**

d) As a final year student of Electronics & Computer Engineering at Soroti University, you are required to work on (execute) a final year research project

Required: Draw a Work Breakdown Structure (WBS) for the research project you are currently executing or that you have proposed. **[7 marks]**

QUESTION TWO

Study the project schedule below showing the duration and sequence of the various tasks that are being planned to implement a certain construction by the Ministry of Works and Transport and answer the questions that follow:

Activity	Duration (Days)	Predecessor
A	3	.....
B	7	A
C	5	B
D	2	A.B
E	4	.....
F	6	E
G	2	F
H	4	G
I	6	E.F.G
J	3	I
K	2	J

a) Draw a network diagram for the project. **[9 marks]**

b) What is the project duration? **[1 mark]**

c) What is the critical path of the project? **[1 mark]**

d) What are the implications if activity F is completed in 8 days during execution? **[1 mark]**

e) What can be done to mitigate the implications in part (d) above? **[2 marks]**

f) Draw a Gantt chart for the project. **[6 marks]**

QUESTION THREE

As a manager of provident fund, you have to make money for your members. As of now you have two projects which are mutually exclusive, Project A and B with the following details;

	Project A	**Project B**
Initial Investment:	UGX 100m	UGX 120m
Net cash inflows in UGX Millions:		
Year 1	30	50
Year 2	30	40
Year 3	50	50
Year 4	50	50
Year 5	50	60

Required:

a) Calculate NPV for each project given that the cost of capital in the economy is 20%. **[6 marks]**

b) For each of the projects above. Find the IRR. **[8 marks]**

c) What recommendations would you give the Fund's Board, based on the computations above? **[2 marks]**

d) Why is the NPV technique preferred to Payback Period for project's appraisal? **[4 marks]**

GOOD LUCK