

**MANICALAND STATE UNIVERSITY
OF
APPLIED SCIENCES**

FACULTY OF AGRIBUSINESS AND COMMERCE

DEPARTMENT OF BUSINESS MANAGEMENT

PROJECT MANAGEMENT

MODULE CODE: HBM 412

SESSIONAL EXAMINATIONS

SEPT/OCT 2021

DURATION: 3 HOURS

EXAMINER: MR. S. MUPARANGI

INSTRUCTIONS

- 1. Answer all questions in Section A and any three questions in Section B.*
 - 2. Section A carries 40 marks whilst Section B carries 60 marks.*
 - 3. Total marks 100.*
 - 4. Credit will be given for appropriate use of examples*
 - 5. Additional materials: Non-programmable scientific calculator*
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(Answer all questions in this section. Section A carries 40 marks)

Question 1 Read the following case study and answer the questions that follow

Construction of Nyanyadzi Dam

After touring Nyanyadzi Business Centre in Manicaland, the Minister of Infrastructure Development noted with concern lack of water for irrigation purposes within the area. Upon returning to Harare, the minister reported to the cabinet, and he was given greenlight to oversee and plan the construction of a dam in the area for irrigation purposes. He then assembled a team to help him deliver the project. A work breakdown structure was completed. Information on the table below was extracted from the work breakdown structure.

Activity	Duration (in months)	Preceding Activity
A	6	-
B	11	A
C	13	A
D	5	B and C
E	9	C
F	11	C
G	11	E and D
H	5	B
I	6	E and F
J	2	H, G and I

Required

- a) Advise the project team on possible risks which might affect the implementation of Nyanyadzi dam project. (8 marks)
- b) Draw a well labeled critical path analysis diagram and indicate critical path. (12 marks)
- c) Perform forward passing and backward passing for all the activities. (10 marks)
- d) Calculate slack for all the activities. Tabulate your answer. (10 marks)

[Total marks: 40]

SECTION B

(Answer any 3 questions from this section. Each question carries 20 marks)

Question 2

A number of national projects in Zimbabwe have been reported to have failed to see the light of the day or materialize. Choose one national project which has faced this fate and discuss reasons for its failure. **[20 marks]**

Question 3

You have been appointed Director of Works and Physical Estates at Manicaland State University of Applied Sciences. During a strategic planning board meeting, you present two project proposals seen as strategic to the University vision. The first project is the construction of a student hostel while the second project is the construction of a function hall which could be used for university as well as community events. However, one member of the university questioned the idea of implementing the two projects at once given the poor financial status of the university. There is consensus on the need to select one project instead of implementing all of them. As the director you propose to use payback period to decide on which project to implement. However, this proposal is rejected and all members suggest and unanimously agree that Net Present Value method must be used. The following information has been presented to you so that you can assist the university in making choice.

Year	Project Cash flows for hostel Project (\$)	Project Cash flows for Hall project (\$)
0	(460 000)	(481 500)
1	35 000	5000
2	50 000	38 000
3	68 000	42 000
4	110 000	145 000
5	120 000	255 000
6	140 000	370 000
Discount rate	17%	12%

Required

- a) Acting on the strategic management board recommendations, advise the management of the university on the project to take and justify. (10 marks)
- b) Identify and justify strategic management board's choice of the project appraisal technique. (10 marks)

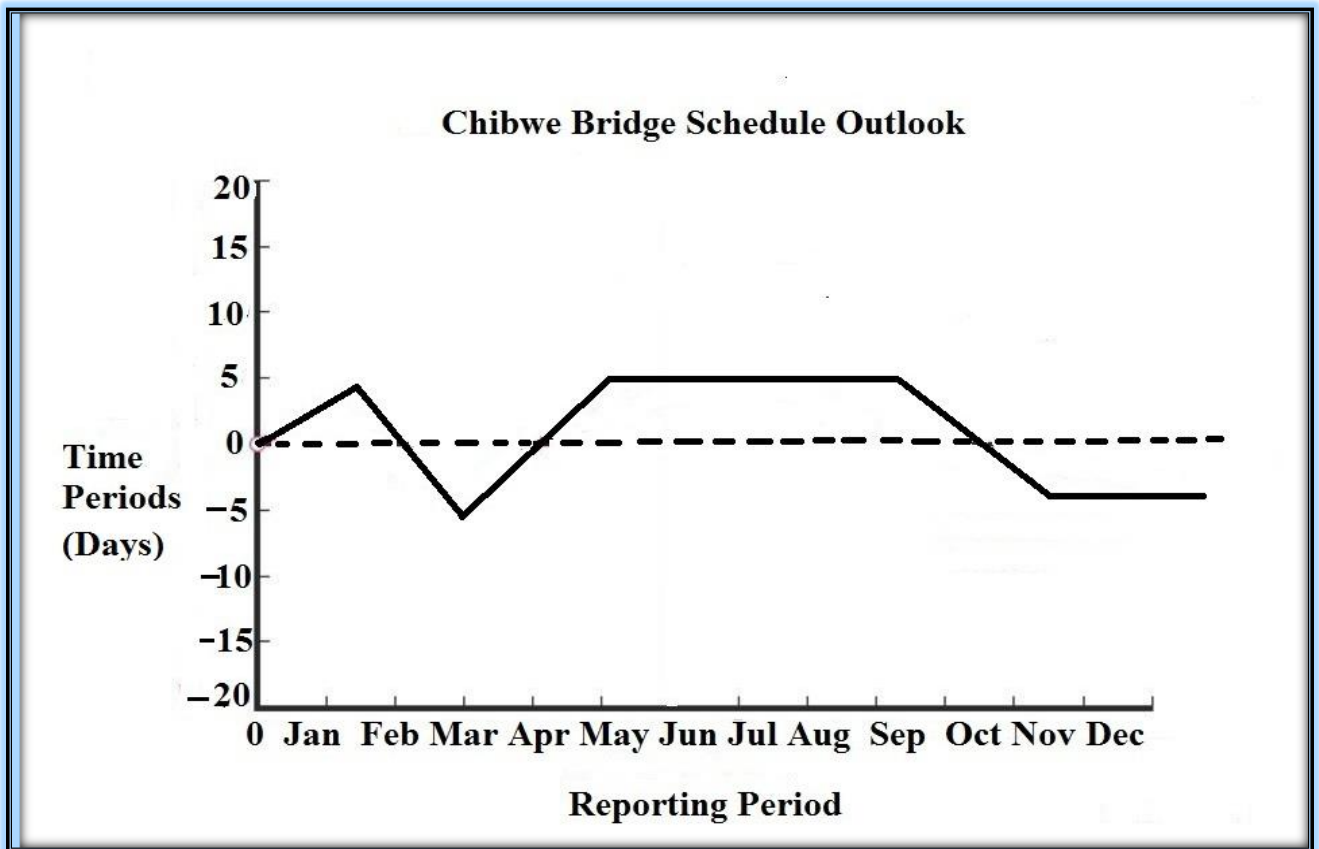
[Total marks: 20]

Question 4

Discuss the application of project management software to each and every stage of the project life cycle. **[20 marks]**

Question 5

The following schedule outlook relates to construction of Chibwe bridge which is currently on going along Masvingo-Beitbridge highway.



- a) Explain the schedule status during the month of March and discuss possible reasons for the situation obtaining. (10 marks)
- b) If the project is resource constrained, briefly discuss options available to the team in order to rescue the project. (10 marks)

[Total marks: 20]

Question 6

In January 2021, Nyatsime Primary School embarked on a project to construct library block using granite stones. The total budget of the library was USD\$36 585. As of today 38% of the work has been completed at cost of \$26 000. Planed Value of work completed \$12 000.

- a) Calculate the following and comment.
 - ii. Schedule Performance Index (SPI). (2 marks)
 - iii. Cost Performance Index (CPI). (2 marks)
- b) Explain probable reasons for such CPI status. (8 marks)
- c) Discuss any 4 key project performance indicators which Nyatsime Primary School can use to evaluate the project. (8 marks)

[Total marks: 20]

END OF EXAM