



First Semester Examination
2021/2022 Academic Session

February/March 2022

EPE431 – Project Management

Duration : 3 hours

Please check that this examination paper consists of FIVE[5] printed pages before you begin the examination.

INSTRUCTIONS : Answer **ALL FOUR [4]** questions.

In the event of any discrepancies, the English version shall be used.

1. [a] Jenny is a project manager who supervises a team of five people from various countries. She has recently been irritated since one of her team members in Mexico has been contacting her at 5 a.m. (her time). He sends her apparently urgent requests when she is asleep or just waking up, and she is tired of receiving 11 requests before she has even set down at her desk.

Identify and briefly discuss the FOUR (4) different alternatives that Jenny can use to resolve the conflict.

(40 marks)

- [b] The Dean of the School of Mechanical Engineering has requested you to organize a badminton tournament among the faculty. The objectives are to provide a platform for social interaction and to improve employee engagement. The tournament is scheduled to be held within the next two months, and budget has been allocated for it.

- (i) Create a Work Breakdown Structure (WBS) for the project.
- (ii) Identify TWO (2) potential risks of the project and propose a risk management strategy.

(40 marks)

- [c] Explain the difference between direct and indirect cost, normal and expedited costs, fixed and variable costs, and recurring and nonrecurring costs. Provide ONE (1) example (total 8 examples) of each combination of these costs.

(20 marks)

2. [a] Table 2[a] indicates the series of activities in a business planning to launch a new product.

Table 2[a]

No	Activity	Predecessor	Optimistic	Likely	Pessimistic
1	Conduct customer research	Starting activity	5	7	10
2	Design product concept	Begin when conduct customer research complete	4	6	7
3	Design and test product prototype	Begin when design product concept complete	10	13	18

...3/-

4	Develop and test production tooling	Begin when design and test product prototype complete	6	7	8
5	Notify suppliers of requirements	Begin when design product concept and design and test product prototype complete	6	9	12
6	Commence production	Begin when develop and test production tooling and notify suppliers of requirements complete	12	4	8
7	Conduct launch promotion	Begin when commence production complete	3	4	5

- (i) Determine the duration for each activity.
- (ii) Which path is critical? (round decimals to the nearest whole number)
- (iii) Suggest TWO (2) methods to reduce the critical path of the project.

(60 marks)

- [b] What is the minimum cost completion time for this project if the activities have normal and crash costs as indicated in Table 2[b] and there is a RM1000 fixed cost for each day on site plus a RM500 penalty for each activity that is crashed?

Activity	Predecessor	Normal Time (days)	Normal Cost (RM)	Crash Time (days)	Crash Cost (RM)
Z	-	2	2,000	2	2,000
Y	-	13	2,000	10	2,300
X	-	19	2,000	15	3,000
W	Z	18	2,000	15	3,000
V	X	10	2,000	9	3,000
U	Y	13	2,000	11	3,000

...4/-

T	W	18	2,000	14	4,000
S	V	4	2,000	3	3,000
R	U	6	2,000	5	3,000
Q	R, S	15	2,000	13	3,000
P	T	13	2,000	12	3,000
N	P, Q	4	2,000	4	2,000

(40 marks)

3. [a] Define the term stakeholder and discuss THREE (3) groups of stakeholder for a postal company.

(20 marks)

- [b] A university is considering three learning methods for a new executive programme targeting potential students from the industry. The first method is traditional face to face classes during the night or weekend. Meanwhile the second method is fully online learning via recorded lectures which students can access based on their own time. The final method is hybrid between face to face and online learning. Use a simple scoring model with at least THREE (3) criteria to evaluate these potential methods. Indicate the best method based on your scoring.

(40 marks)

- [c] Discuss TWO (2) examples each for a traditional and non-traditional project champion duties towards a successful project.

(40 marks)

4. [a] As a Project Manager, one of your main tasks is to plan and identify the resources required for completing a project. Identify five heuristics for prioritizing resource allocation to activities. Based on your opinion, justify ONE (1) decision rule that you would apply as a project manager.

(20 marks)

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- [b] Figure 4 shows a resource loading chart of a project. Use the information to fill in the Table 4. All activities in the chart are shown with early start times.

Figure 4

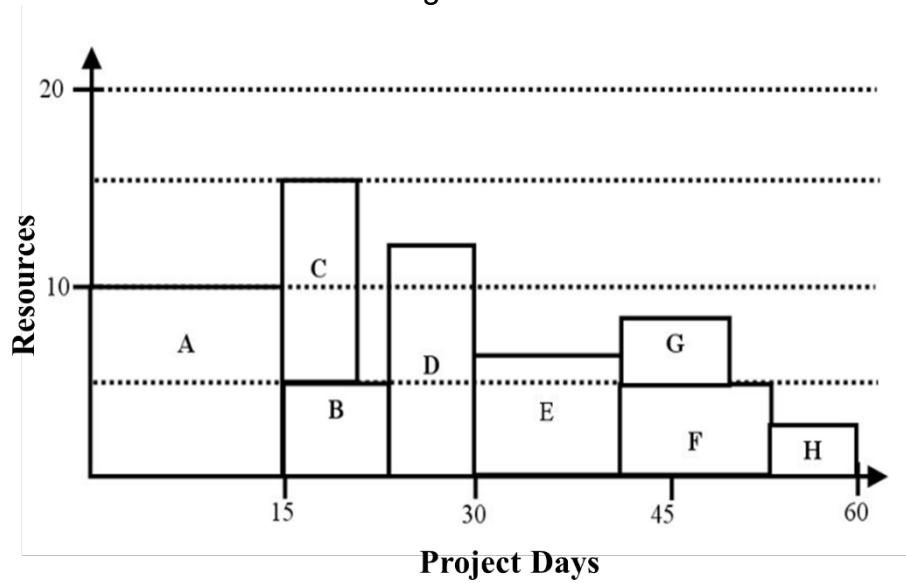


Table 4

Activity	Duration	Predecessors	Early Start	Early Finish	Resources	Slack
A		-		15		0
B	9	A	15			
C	5	A				
D		B			12	
E	11	D	30			
F		C, E				
G	9	E		50		
H	8	F, G			2.5	0

(50 marks)

- [c] There are four stages of project implementation. Choose ONE (1) stage and discuss TWO (2) key success factors at the stage.

(30 marks)

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