



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 6 Examination in Engineering: November 2022

Module Number: IS6201

Module Name: Entrepreneurship and Project Management

[Three Hours]

[Answer all questions, each question carries ten marks]

- Q1. a) Define the term 'entrepreneurship' in your own words. [2 Marks]
- b) Explain four key characteristics of an entrepreneur. [4 Marks]
- c) 'Entrepreneurs are born, not made.' Do you agree with this statement or not? Explain your answer. [4 Marks]
- Q2. a) Briefly explain the term 'Innovation' in your words. [2 Marks]
- b) What are the different types of innovation? Explain three of them briefly. [5 Marks]
- c) Briefly explain the inter-relationships between innovation, entrepreneurship, and engineering science. [3 Marks]

- Q3. a) Business plan can be used a strategic guide. Discuss this statement.
[4 Marks]
- b) List down main sections of a business plan.
[4 Marks]
- c) What are the key barriers towards entrepreneurship in Sri Lanka?
Suggest strategies to overcome such obstacles.
[2 Marks]
- Q4. a) Briefly explain the term 'Project' in your words.
[2 Marks]
- b) Explain the concept of 'Work Breakdown Structure (WBS)' by using an
example from your engineering specialization.
[4 Marks]
- c) Briefly explain the project managers' role.
[4 Marks]
- Q5. Using the information in Table 1;
- a) Draw a network diagram using Activity on Arrow (AoA) method.
[6 Marks]
- b) Find the project completion time.
[2 Marks]
- c) State the critical path.
[2 Marks]

Table 1

Activity	Predecessor	Duration (days)
A	-	2
B	-	3
C	A	2
D	A,B	4
E	C	4
F	C	3
G	D,E	5
H	F,G	2

Q6. The activities associated with a project and related details are given in the following Table 2.

Table 2

Activity	Predecessor	Normal Time (Days)	Crash Time (Days)	Normal Cost (Rs.)	Crash Cost (Rs.)
A	-	2	1	22,000	22,750
B	-	3	1	30,000	34,000
C	A	2	1	26,000	27,000
D	A,B	4	3	48,000	49,000
E	C	4	2	56,000	58,000
F	C	3	2	30,000	30,500
G	D,E	5	2	80,000	84,500
H	F,G	2	1	16,000	19,000

a) Draw a network diagram for the project.

[2 Marks]

b) Find the project completion time and cost.

[2 Marks]

c) If client wants to reduce the project completion by 2 days, what is the minimum additional cost required?

[6 Marks]