



UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 6 Examination in Engineering: December 2018

Module Number: IS6203

Module Name: **Entrepreneurship and Project Management**

[Three Hours]

[Answer all questions, each question carries ten marks]

- Q1 a) Briefly explain the term 'entrepreneurship' in your own words. [2 Marks]
- b) Explain four key characteristics of an entrepreneur. [4 Marks]
- c) Explain four benefits of entrepreneurship. [4 Marks]
- Q2 a) Explain four drawbacks of entrepreneurship. [4 Marks]
- b) Explain the impact of entrepreneurship on economy. [3 Marks]
- c) What are the key barriers towards promoting entrepreneurship in Sri Lanka? [3 Marks]
- Q3 a) Briefly explain the main sections of a business plan. [4 Marks]
- b) Explain the necessity and importance of developing a business plan. [3 Marks]
- c) What are the different types of innovation? Explain them briefly. [3 Marks]

- Q4 a) Briefly explain the term 'Project Management' in your words. [2 Marks]
- b) Explain key challenges of project management. [4 Marks]
- c) Explain the project managers role briefly. [4 Marks]

Q5 Using the information in Table 1, answer the questions given below.

Assume the project team will work a standard working week (5 working days in 1 week) and that all task will start as soon as possible.

Table 1

Task	Duration (Working Days)	Predecessor/s
A	15	-
B	5	-
C	8	B
D	7	A, C
E	10	A
F	10	E
G	20	E
H	5	G
I	5	D, F
J	5	G, I
K	7	G, I
L	8	H, K

- a) Draw the network diagram. [5 Marks]
- b) Calculate the planned duration of the project in weeks. [1 Marks]
- c) Calculate the float (slack) of each activity and identify the critical path. [4 Marks]

Q6 Using the information in Table 2, answer the questions given below.

Table 2

Activity Label	Normal time (days)	Crash time (days)	Normal Cost (Rs.)	Crash Cost* (Rs.)	Predecessor Activities
A	5	3	500	1100	-
B	18	15	900	2400	A
C	12	9	2500	3000	A
D	9	7	500	650	B
E	15	12	3000	5000	B
F	12	10	4000	5000	C, D
G	20	15	3600	4600	E, F

*Crash cost – total cost to achieve crash time

a) Calculate the normal project completion time and cost.

[2 Marks]

b) If you want to complete this project in 56 days at a minimum cost, what activities should be crashed and by how many days?

[6 Marks]

c) What is the minimum total cost to ensure that this project is completed in 56 days?

[2 Marks]