



University of Sri Jayewardenepura
Faculty of Humanities and Social Sciences

Bachelor of Arts Fourth Year First Semester Examination
August/September - 2018

Economics
ECON 4122 .03 - Project Management

Time: Three hours (03)

This paper consists of **Four (04)** questions. You are required to **answer all questions**.

01.

- i. Differentiate key attributes of a project from other works. (04 marks)
- ii. Briefly explain the project management cycle with special emphasis on its stages. (05 marks)
- iii. Sri Lankan government is evaluating a Monorail project to reduce the road traffics in Colombo and suburbs. Briefly explain the following concepts and its applications in relation to the Monorail project.
 - a. Financial feasibility
 - b. Operational feasibility
 - c. Technical feasibility
 - d. Environmental feasibility (12 marks)
- iv. Financial Analysis is not suitable to analyze the feasibility of the Monorail project in above part (iii). Do you agree with this statement? Explain your answer. (04 marks)

(Total 25 marks)

02.

- i. Work Breakdown Structure (WBS) is the foundation document in project planning. Explain the meaning of the above statement. (05 marks)
- ii. Briefly explain Five (05) methods that can be applied to develop a WBS. (05 marks)

- iii. Suppose that you are the President of the Economics Students Association, University of Sri Jayewardenepura. The Association has planned to organize Research Conference for the final year students of the university. Assuming you are the coordinator of the project, develop a WBS with minimum three levels of activities and sub-activities. (15 marks)

(Total 25 marks)

03.

- i. Explain the triple constraints in projects. (03 marks)
- ii. Briefly explain the Analogy Method that can be used to estimate the duration of an activity. (04 marks)
- iii. You are given the following activities and durations in relation to a wedding album preparing project.

<u>Activity</u>	<u>Duration (days)</u>
Photo shooting	4
Photo editing	6
Sending photos for photo selection	1
Collecting the list of selected photos	1
Photo printing	5
Final binding	1

You should explain the following concepts with the help of the above project.

- a. Discretionary dependencies in projects
- b. External dependencies in projects
- c. Finish to Start relationships
- d. Lead time
- e. Lag time (10 marks)
- iv. The Mayor of a city is planning to introduce 802.11b single band WIFI facilities to all the city center facilities in the city. This project will enhance the e-governance in the city. This is a six month and it will be completed by March 2019. Develop a project charter for the above project. (08 marks)

(Total 25 marks)

04.

(a) Briefly explain the advantages in the implementation of Critical Path Method (CPM) and Project Evaluation and Review Technique (PERT) for network analysis.

(03 Marks)

(b) What is meant by project crashing time cost-trade off effect?

(02 Marks)

(c) David and Company has developed a new proposal for introducing a new computer system. The Company project manager has listed activity schedule in Table 4.1 for this project.

Table 4.1

Activity	Predecessor(s)	Time (Weeks)
A	None	6
B	None	7
C	A,B	5
D	B	8
E	A,B	2
F	C	4
G	D,E	3
H	D	5
I	B	6
J	B	6
K	J	3
L	F, G	8
M	H, I	5

(i) Draw the project network.

(02 Marks)

(ii) Determine the critical path.

(02 Marks)

(iii) Identify the entire project completion time.

(02 Marks)

(iv) Can activity "C" and "L" be delayed without affecting the entire project completion time?

(02 Marks)

(v) Calculate the total float and free float of activities "B" and "L".

(02 Marks)

- (d) The owner of a chain of Chinese restaurants is planning to computerize the accounting and inventory system of the organization. The software development firm has provided the following Table 4.2 information regarding this project.

Table 4.2

Activity	Immediate Predecessor	Time (Days)		
		Optimistic	Pessimistic	Most likely
A	None	2	4	3
B	None	3	5	4
C	A	4	6	5
D	B	1	3	2
E	B,C	2	4	3
F	B	3	5	4
G	E,D	5	7	6
H	D,E,F	2	4	3
I	B,C	1	3	2
J	G,H	2	4	3
K	I,J	1	3	2

- (i) Draw the project network (04 marks)
 (ii) Identify the critical path. (01 mark)
 (iii) Identify entire project completion time. (01 mark)
 (iv) Can activities "E" and "G" be delayed without delaying the entire project? (02 marks)
 (v) Determine the probability of completing the project in 26 days. (02 marks)

(Total Marks 25)