



Uva Wellassa University

Faculty of Management

SECOND YEAR FIRST SEMESTER EXAMINATION – FEB/MARCH 2012

BGE 221-3 Economics and Project Management

Part C – Essay Questions

Answer all questions
Marks allocated : 50

- i. Discuss the advantages and disadvantages of matrix project management structure. (2 marks)
- ii. Differentiate project direct costs from indirect costs with appropriate examples. (2 marks)
- iii. What is project appraisal and why it is important? (2 marks)
- iv. ABC group has identified an initial outlay of Rs 900,000 for a project and the expected return from the project is Rs 1,400,000.
 - a) Calculate the Return on Investment (ROI) for the above project. (2 marks)
 - b) Advise ABC group with merits and demerits of using ROI. (2 marks)
- v. Calculate the payback period for each of the following projects and give your recommendation based on the payback method for project appraisal. (4 marks)

Period	Project X		Project Y		Project Z	
	Cost	Benefit	Cost	Benefit	Cost	Benefit
1	800	0	15000	0	12000	12000
2	800	0	10000	5000	10000	12000
3	800	800	5000	10000	8000	12000
4	800	800	1000	10000	6000	12000
5	800	1600	1000	5000	4000	12000
6	800	2400	500	5000	2000	12000

- vi XYZ Company's cost of capital is 12% and considers the following project options for the next financial year.

Year	Project A Estimated cash flow (Rs)	Project B Estimated cash flow (Rs)	Project C Estimated cash flow (Rs)
0	-2000	-8,000	-50,000
1	-500	-8,000	15,000
2	1500	-8,000	15,000
3	2500	-8,000	15,000
4	2000	32,000	15,000

Calculate the Net Present Value (NPV) for each project and give your recommendations to the management of XYZ Company for project selection. (6 marks)

- vii. The following information has been given pertaining to a Project.

Activity	Description	Preceding Activity	Time Duration (Days)
A	Project Appraisal	None	12
B	Approve structural designs	None	11
C	Start piling	A	35
D	Ordering supplies	A	12
E	Foundation	A	20
F	Construction	B	40
G	Interior designs	C,D,E,F	60
H	Landscaping	G	18
I	Electrical systems	G	6
J	Furnishing	H,I	7
K	Fittings	J	9
L	SOEs	J	5
M	Building service testing	J	4
N	Traffic testing	K,L	4
O	Testing operations	M	7
P	Occupation	N,O	10

- a) Develop the network diagram for the above project activities using the Activity on Node technique and calculate the minimum overall project completion time. (3 marks)
- b) Calculate slack time for each activity and identify the critical path. (2 marks)

02.

A) Total cost function and demand function of monopoly firm are given as follows

$$TC = 2Q^3 - 3Q^2 + 400Q + 5000 \text{ and } P = 4000 - 33Q.$$

- i. Find the TVC function (1 Mark)
- ii. Find the AVC function (1 Mark)
- iii. Find the MC function (1 Mark)
- iv. Find the equilibrium output of the firm. (3 Marks)
- v. Find the maximum profit of the firm. (2 Marks)
- vi. Find the elasticity of demand at the equilibrium output level (2 Marks)
- vii. What will happen to the equilibrium output, if demand function is $P = 4500 - 20Q$? (2 Marks)
- viii. Check whether there is a profit or loss when demand function is $P = 4500 - 20Q$ (2 Marks)

B)

- i. Show the stage of production graphically and explain in which stage the rational producers are going to produce. (2 Marks)
- ii. Briefly explain the reason for the shape of the Short Run Total Production (TP) curve. (2 Marks)
- iii. Explain the different types of Returns to Scale. (3 Marks)
- iv. What are the objectives of imposing a tax? Explain the effect of a specific tax graphically. (2 Marks)
- v. Explain the short run equilibrium of a monopoly firm using a diagram. (2 Marks)