Uva Wellassa University

Faculty of Management

SECOND YEAR FIRST SEMESTER EXAMINATION – FEB./MARCH 2012

BGE 221-3 Economics and Project Management

Instructions

No. of pages : Four (04)

No. of questions : Twenty (20) in Part A

Index No:

Part C – Essay Questions

Answer all questions

Marks allocation : 50

1.

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 form the project is Rs 1,400,000.

a) Calculate the Return on Investment (ROI) for the above project. (2 marks)

b) Advice 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 pilling	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

$TC = 2Q^3 - 3Q^2 + 400Q + 5000$ 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)

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