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Fourth Semester MBA Degree Examination, June/July 2011
Project Appraisal, Planning and Control

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any FOUR full questions from Question no 1 to Question no 7.
2. Question No. 8 is compulsory.

1.
 - a. What are the three important reasons which make capital investment decisions important? (03 Marks)
 - b. Explain the different phases of capital budgeting. (07 Marks)
 - c. Explain BCG matrix and GE spotlight matrix. (10 Marks)
2.
 - a. What is sensitivity analysis? (03 Marks)
 - b. What are the sources of net present value? (07 Marks)
 - c. What are the sources of project ideas? (10 Marks)
3.
 - a. What are the key steps in decision tree analysis? (03 Marks)
 - b. Alpha Limited is considering two machines A and B. Both the machines serve the same purpose. Machine A, a standard model costs Rs. 75,000 and lasts for 5 years. Its annual operating costs will be Rs. 12,000. Machine B, an economy model costs Rs. 50,000 but lasts for only 3 years. Its annual operating costs will be Rs. 20,000. How should Alpha Limited choose between the two machines? (Assume a discount rate of 12 percent). (07 Marks)
 - c. The scientists at spectrum have come up with an electric moped. The firm is ready for pilot production and test marketing. This will cost Rs. 20 million and takes six months. Management believes that there is 70 percent chance that the pilot production and test marketing will be successful. In case of success, spectrum can build a pilot plant costing Rs. 150 million. The plant will generate an annual cash inflow of Rs. 30 million for 20 years if the demand is high or an annual cash inflow of Rs. 20 million if the demand is low. High demand has a probability of 0.6; low demand has a probability of 0.4. What is the optimal course of action using decision tree analysis? Assume a discount rate of 12 percent. (10 Marks)
4.
 - a. What is social cost Benefit analysis? (03 Marks)
 - b. What are the pre requisites for successful project implementation? (07 Marks)
 - c. Consider the following projects that are being implemented by a firm which has a capital budget constraint of Rs. 30,00,000.

Project	Outlay (Rs)	NPV (Rs)
A	18,00,000	7,50,000
B	15,00,000	6,00,000
C	12,00,000	5,00,000
D	7,50,000	3,60,000
E	6,00,000	3,00,000

Projects B and C are mutually exclusive. Other projects are independent. Determine the feasible combinations of projects to maximize NPV. (10 Marks)

5.
 - a. What is a work schedule? (03 Marks)
 - b. What are the principal discrepancies that needs to be considered while undertaking social cost benefit analysis? (07 Marks)
 - c. What is the procedure associated with availing term loan? Explain. (10 Marks)

- 6 a. What are the three elements of a cash stream? (03 Marks)
 b. What are the principal issues considered and the criteria employed in project appraisal for term loan by financial institutions? (07 Marks)
 c. The balance sheet of Swaraj limited at the end of year n (the year which is just over) is as follows.

Liabilities		Assets	(Rs. in millions)	
Share capital	5	Fixed assets	11	
Reserves and Surplus	4	Investments	0.5	
Secured loans	4	Current Assets:		
Unsecured loans	3	Cash	1	
Current liabilities	6	Receivables	4	
Provisions	1	Inventories	6.5	11.5
	23			23

The projected income statement and the distribution of earnings is given below:

	(Rs. in millions)
Sales	25
Cost of goods sold	19
Depreciation	1.5
Profit before interest and tax	4.5
Interest	1.2
Profit before tax	3.3
Tax	1.8
Profit after tax	1.5
Dividends	1.0
Retained earnings	0.5

During the year n + 1, the firm plans to raise a secured term loan of Rs. 1 million, repay a term loan to the extent of Rs. 0.5 million. Current liabilities and provisions would increase by 5 percent. Further, the firm plans to acquire fixed assets worth Rs. 1.5 million and raise its inventories by Rs. 0.5 million. Receivables are expected to increase by 5 percent. The level of cash would be the balancing amount in the projected balance sheet.

Given the above information, prepare the following.

- i) Projected cash flow statement.
 ii) Projected balance sheet. (10 Marks)
- 7 a. What is meant by "abandonment analysis"? (03 Marks)
 b. What is meant by "Environment Impact Assessment"? What are the methodologies for Impact Assessment? Explain (07 Marks)
 c. A project consists of the following activities. The activities and their time estimates are shown below.

Activity	Time in weeks		
	Optimistic time	Most likely time	Pessimistic time
1-2	3	6	9
2-3	4	5	12
1-4	4	6	8
1-7	2	4	6
2-4	6	10	20
2-6	3	4	5
2-7	5	9	13
3-4	3	7	11
4-5	2	4	6
5-6	4	6	8
3-7	2	5	8
6-7	4	5	6

- i) Draw the network diagram.
- ii) Determine critical path.
- iii) Determine the standard deviation of critical path.
- iv) Compute the probability of completing the project in 35 weeks. (10 Marks)

8 CASE STUDY:

Tejas Enterprises is determining the cash flow for a project involving replacement of an old machine by a new machine. The old machine bought a few years ago has book value of RS. 4,00,000 and it can be sold to realize a post-tax salvage value of Rs. 5,00,000. It has a remaining life of five years after which its net salvage value is expected to be RS. 1,60,000. It is being depreciated annually at a rate of 15 percent under the written down value method. The net working capital required for the old machine is Rs. 4,00,000. The new machine costs Rs. 16,00,000. It is expected to fetch a net salvage value of Rs. 8,00,000 after five years when it will no longer be required. The depreciation rate applicable to it is 15 percent under the written down value method. The net working capital required for the new machine is Rs. 5,00,000. The new machine is expected to bring a saving of Rs. 2,57,143 annually in manufacturing costs (other depreciation). The tax rate applicable to the firm is 30 percent.

- i) Given the above information, estimate the cash flows associated with the replacement project.
- ii) What is the NPV of the replacement project if the cost of capital is 10 percent? (20 Marks)

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