05MBAFM425

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NEW SCHEME

Fourth Semester M.B.A. Degree Examination, July 2007
Business Administration
Project Appraisal, Planning and Control

Time: 3 hrs.] [Max. Marks:100

Note : *1. Answer any FOUR questions from Q.No1 to Q.No.7*
2. Question No.8 is compulsory.
3. Use of interest factor tables is allowed.

1 a. Describe the importance and difficulties of capital investment. (03 Marks)
b. Discuss the phases of capital budgeting. (07 Marks)
c. Explain the facets of project analysis. (10 Marks)

2 a. What are the three key criteria, which reflect the objective of maximizing wealth of shareholder? (03 Marks)
b. Discuss the various elementary investment options, which influence resource allocation strategy. (07 Marks)
c. Explain the SPACE approach and the various postures associated with it. (10 Marks)

3 a. Describe the important investment criteria. (03 Marks)
b. Discuss about the biases in cash flow estimation. (07 Marks)
c. Following information is given about revenue and cost for a company 'XYZ'. (Amount in Rs.)

	Year '0'	Year (1-10)
Investment	(20,000)	-
Sales	-	18000
Variable cost	(2/3 of sales)	12000
Fixed cost	-	1000
Depreciation	(10% fixed)	2000

i) Assuming that the cost of capital is 12% and tax rate @ 33.33%, calculate the NPV.
ii) Calculate the effect of variation in investment. Assume Investment under two situations i) Rs. 24000 ii) Rs. 18000.
iii) Assuming equal probability of all the three investment amounts what is the risk of the project in term of standard deviation of NPV? (10 Marks)

4 a. What are the pros and cons of sensitivity analysis? (03 Marks)
b. Discuss the different ways of managing the project related risks. (07 Marks)
c. A project requires Rs 5 million investment. The expected costs generation is Rs.1 million per year for 8 years. The opportunity cost is 15% p.a. The cost of issuing equity is 5%. The project enables to raise Rs. 2.4 million debt at an interest rate of 14% p.a. The debt will be paid in 8 equal annual installments at the end of each year. Tax rate is 40%. Calculate i) Base case NPV ii) Adjusted Net Present Value (APV). (10 Marks)

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5 a. What are the sources of discrepancy between social cost and benefits of a project and monetary cost and benefits of the project? (03 Marks)

b. Discuss the five stages of project appraisal in UNIDO method. (07 Marks)

c. Describe the key steps in the public investment decision making process in India. (10 Marks)

6 a. What are the various methods of demand forecasting? (03 Marks)

b. Discuss the properties of NPV rule. (07 Marks)

c. Following information is available about a project. Initial investment outlay Rs. 100 lacs, consisting of Rs. 80 lacs on plant and machinery and Rs. 20 lacs on net working capital. Life of the project is 5 years. Net salvage value on fixed assets at the end of 5 years is Rs 30 lacs. Net working capital will be liquidated at book value. The incremental revenue from the project is Rs 120 lacs per year. Increase in cost is Rs. 80 lacs per year. [Excluding depreciation, interest and tax]. The tax rate applicable is 30%. Plant and Machinery will be depreciated at 25% p.a. on WDV basis. Calculate and show the projected cash flow of the project. (10 Marks)

7 a. Describe the features of 'term loan'. (03 Marks)

b. Discuss the procedures associated with availing term loan. (07 Marks)

c. Explain the pre requisites for successful project implementation. (10 Marks)

8 CASE STUDY :

A project consists of 6 activities and their time estimates are given below. (time in weeks)

Activity	t_o	t_m	t_p
1 – 2	9	12	21
1 – 3	6	12	18
2 – 4	1	1.5	5
3 – 4	4	8.5	10
2 – 5	10	14	24
4 - 5	1	2	3

a. Draw the network diagram showing the details.

b. Calculate the event slack and determine critical path.

c. Calculate activity floats.

d. Find the standard deviation of critical path duration. (20 Marks)

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Fourth Semester MBA Degree Examination, Dec. 07 / Jan. 08
Project Appraisal, Planning and Control

Time: 3 hrs. Max. Marks:100

Note : *1. Answer any FOUR full questions from Q.No.1 to 7.*
2. Q.No.8 is compulsory.
3. Show the workings wherever necessary.
4. Use of present value tables allowed.

1 a. What do you mean by project management? (03 Marks)
b. Explain the portfolio analysis according to BCG matrix. (07 Marks)
c. Explain the various aspects considered in technical analysis of the project. (10 Marks)

2 a. Why are capital investments considered as most important decisions in Business? (03 Marks)
b. Explain any three investment appraisal criteria in practice. (07 Marks)
c. Discuss the UNIDO approach to Social Cost Benefit Analysis (SCBA)? (10 Marks)

3 a. What are the means of finance for projects in India? (03 Marks)
b. Explain the procedures associated with the sanction of term loan. (07 Marks)
c. Discuss the facets of project analysis. (10 Marks)

4 a. What do you mean by environmental appraisal of projects? (03 Marks)
b. Write short notes on sensitivity analysis and scenario analysis. (07 Marks)
c. The balance sheet of ABC Ltd. at the end of year n is as follows:

Liabilities	(In lakhs)	Assets	(In lakhs)
Share capital	50	Fixed assets	110
Reserves and surplus	40	Investment	5
Secured loans	40	Current assets	115
Unsecured loans	30	Cash	10
Current liabilities	60	Receivables	40
Provisions	10	Inventories	65
			230

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

	(Rs. in lakh)
Sales	250
Cost of goods sold	190
Depreciation	15
Earnings before interest and taxes	45
Interest	12
Profit before tax	33
Tax	18
Profit after tax	15
Dividends	10
Retained earnings	5

During the year n+1 the firm plans to raise a secured term loan of Rs.10 lakhs repay a previous term loan to the extent of Rs.5 lakhs. Current liabilities and provisions would increase by 5 percent. Further, the firms plans to acquire fixed assets worth Rs.15 lakh and raise inventories by Rs.5 lakhs. Receivables are expected to increase by 5 percent. The level of cash would be the balancing amount in the projected balance sheet.

Prepare: i) Projected cash flow statement
ii) Projected balance sheet. (10 Marks)

5 a. What are the applications of network techniques in project management? (03 Marks)
b. Explain the Porter model for estimation of profit potential of industries. (07 Marks)

c. Consider the following nine investment projects:

Project	Net present value	Cash outflow in Period 1	Cash outflow in Period 2
1	14	12	3
2	17	54	7
3	17	6	6
4	15	6	2
5	40	30	35
6	12	6	6
7	14	48	4
8	10	36	5
9	12	18	3

The funds constraints for Period 1 and Period 2 are 50 and 20 respectively. Develop the linear programming formulation of the above problem. (10 Marks)

6 a. What do you mean by capital asset pricing model? (03 Marks)

b. Explain the different postures of Strategic Position and Action Evaluation (SPACE) approach. (07 Marks)

c. The scientist 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 take six months. Management believes that there is a 70 percent chance that the pilot production and test marketing will be successful. In course of success, spectrum can build a 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? (10 Marks)

7 a. Explain the concept of characterization of the market in market and demand analysis of a project. (05 Marks)

b. Naveen Enterprises is considering a capital project about which the following information is available.

The investment outlay on the project will be Rs.100 million. This consists of Rs.80 million on plant and machinery and Rs.20 million on net working capital. The entire outlay will be incurred at the beginning of the project.

The project will be financed with Rs.45 million of equity capital, Rs.5 million of preference capital and Rs.50 million of debt capital. Preference capital will carry an interest rate of 15 percent.

The life of the project is expected to be 5 years. At the end of 5 years, fixed asset will fetch a net salvage value of Rs.30 million whereas net working capital will be liquidated at its book value.

The project is expected to increase the revenues of the firm by Rs.120 million per year. The increase in costs on account of the project is expected to be Rs.80 million per year (this includes all items of cost other than depreciation, interest and tax). The effective tax rate will be 30 percent.

Plant and machinery will be depreciated at the rate of 25 percent per year as per the written down value method. Hence the depreciation charge will be:

First year	:	Rs.20 million
Second year	:	Rs.15 million
Third year	:	Rs.11.25 million
Fourth year	:	Rs.8.44 million
Fifth year	:	Rs.6.33 million

For the above information prepare project cash flows. (15 Marks)

8 CASE STUDY:

A construction project in steel industry consists of six activities. The normal times, crash times and the cost of crashing each activity are given below:

Activity	Normal time (days)	Crash time (days)	Crash cost/day (Rs.)
1 - 2	7	5	25
1 - 3	8	7	10
1 - 4	18	14	15
2 - 4	10	7	20
3 - 4	12	10	30
4 - 5	3	3	-

Required: a) Draw the net work b) Normal time to complete the project c) The total crashing [illegible] for completing the project in least possible time d) A fixed expense of Rs.35 per day is incurred. What will be the most optimum project duration? (20 Marks)

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Fourth Semester MBA Degree Examination, June – July 2009

Project Appraisal Planning Control

Time: 3 hrs. Max. Marks:100

Note: ***Answer any Four full questions from Q No.1 to 7,Q No. 8 is compulsory.***

1 a. What is SCBA? **(03 Marks)**

b. Explain any three casual methods of demand forecasting. **(07 Marks)**

c. Discuss the mistakes commonly committed in applying DCF analysis to capital budgeting. **(10 Marks)**

2 a. What are principles of cash flow estimation? **(03 Marks)**

b. What is IRR for the following project? Comment on IRR. **(07 Marks)**

Cash flows	C_0	C_1	C_2
	(1,60,000)	1,000,000	-1,000,000

c. Describe briefly technical issues to be considered in technical analysis. **(10 Marks)**

3 a. What is capital rationing? **(03 Marks)**

b. Describe briefly the various means of financing of project. **(07 Marks)**

c. Explain Porter model of profit potential of industries. **(10 Marks)**

4 a. What is scenario analysis? **(03 Marks)**

b. A firm is considering two machines A and B. The machine a costs Rs. 75,000 and lasts 5 years with annual operating cost of Rs. 12,000. Machine B costs Rs. 50,000 but lasts only 3 years with annual operating cost of Rs. 15,000. How should the firm choose between two machines? Assume discount rate 12%. **(07 Marks)**

c. Consider the following projects (All inRs.)

Project	1	2	3	4	5	6	7	8	9
NPV	44	30	20	25	35	24	42	28	60
Cash out flow in year 1	50	40	10	36	25	43	40	33	75
Cash out flow in year 2	48	22	40	5	60	15	0	14	18

Budget constraints for two years are 150 and 180.
a) project 1 and 2 are mutually exclusive b) out of projects 4, 5, and 6 at least two must be accepted c) project 9 can't be accepted unless 4 and 6 are accepted d) project 7 can be delayed by one year, such a delay doesn't change cash outflow but reduces NPV to 35. e) project 8 and 9 are complimentary. If two are accepted together the outflow is less by 8% and NPV is more by 10%. Formulate integer LPP. **(10 Marks)**

5 a. What do you mean by project management? **(03 Marks)**

b. Explain steps in decision tree analysis. **(07 Marks)**

c. Explain briefly different project appraisal criteria. **(10 Marks)**

6 a. What is DPR? (03 Marks)
b. What are the mistakes committed in financial analysis. (07 Marks)
c. Find the critical path and draw network find project duration.

Job	1–2	1–6	2–3	2–4	3–5	4–5	6–7	5–8	7–8
t_o	3	2	6	2	5	3	3	1	4
t_m	6	5	12	5	11	6	9	4	19
t_p	15	14	30	8	17	15	27	7	28

(10 Marks)

7 a. What is simulation analysis in project finance? (03 Marks)
b. What are steps in UNIDO method of project appraisal? (07 Marks)
c. How do you carry out abandonment analysis? (10 Marks)

8 CASE STUDY :

a. A project costs Rs. 100 million. It consists Rs. 80 million on machine and Rs. 20 million on working capital. The project is financed by Rs. 45 million equity capital, Rs. 5 million of 15% preference capital and Rs. 50million of 15% debt capital. Life of the project is 5 years. The net salvage is Rs. 30 million, net working capital is liquidated at book value. The revenue is Rs. 120 million per year. Running cost is Rs. 80million. Tax rate is 30%. Depreciation charges are Rs. 20, 15, 11.25, 8.44 and 6.33 million respectively for five years. Find the cash flows for the years. (10 Marks)

b. For a flour mill project the following date is available.
Variable cost is $\frac{2}{3}$ of sales. Fixed cost is Rs. 1 million, depreciation is Rs. 2 million. Tax rate is 33.33% cash flows last 10 years. PVIFA (10, 12%) is 5.65. Find financial B.E.P if investment is Rs. 20 million. (10 Marks)

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08MBAFM425

Fourth Semester MBA Degree Examination, May/June 2010
Project Appraisal, Planning and Control

Time: 3 hrs. Max. Marks:100

Note: ***1. Answer any FOUR full questions from Q.1 – Q.7. 2. Question No. 8 is compulsory.***

1 a. What are the three important reasons which make capital investment decision important? **(03 Marks)**

b. What are the important sources of secondary information for market demand analysis? **(07 Marks)**

c. Explain the different phases of capital budgeting. **(10 Marks)**

2 a. What is a project rating index? **(03 Marks)**

b. Briefly describe any two portfolio planning tools. **(07 Marks)**

c. Alpha limited is considering two machines. Machine A, a standard model, costs Rs.75,000 and lasts for five years. Its annual operating costs will be Rs.12,000. Machine B, an economy model, costs Rs.50,000, but lasts for only three years. Its annual operating costs will be Rs.20,000. Which machine should Alpha limited choose and why? **(10 Marks)**

3 a. What is meant by sensitivity analysis? **(03 Marks)**

b. What are the rationale for conduct of social cost benefit analysis? **(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	Rs. in million	Assets	Rs. in million
Share capital	5	Fixed assests	11
Reserves and surplus	4	Investments	0.5
Secured loans	4	Current assets	11.5
Unsecured loans	3	Cash 1	
Current liabilities	6	Receivables 4	
Provisions	1	Inventories 6.5	
	23		23

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

	Rs. in million
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 and repay a previous term loan to the extent of 0.5 million. Current liabilities and provisions would increase by 5%. Further, the firm plans to acquire fixed assets worth Rs. 1.50 million and raise its inventories by Rs.0.5 million. Receivables are expected to increase by 5%. 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)**

4 a. What is meant by scenario analysis? **(03 Marks)**

b. What are the different aspects considered in technical analysis? **(07 Marks)**

c. Consider a set of five projects :

Project	Initial Outlay (Rs.)	Estimated Annual Cash Inflow (Rs.)	Project Life
M	50,000	18,000	10
N	100,000	50,000	4
O	120,000	30,000	8
P	150,000	40,000	16
Q	200,000	30,000	25

Rank the five projects on the dimensions of NPV, IRR and BCR. The discount rate is 10%. **(10 Marks)**

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, eal to evaluator and /or equations written eg, 42+8 = 50, 'll be treated as malpractice.

5 a. What is meant by social cost benefit analysis? **(03 Marks)**

b. What are the principal issues considered in project appraisal by financial institutions? **(07 Marks)**

c. Consider the following ten investment projects :

Projects	Cash Outflow in year 1 (Rs. lakhs)	Cash Outflow in year 2 (Rs. lakhs)	Net Present Value (Rs. lakhs)
1	15	20	14
2	35	25	03
3	110	90	20
4	51	52	42
5	47	0	11
6	70	11	16
7	91	15	5
8	81	31	37
9	22	63	36
10	11	07	5

The budget constraints for year 1 and 2 are 200 and 175 respectively. Of the set of projects 2, 6 and 8, at least one must be selected. Projects 3 and 3 are mutually exclusive. Project 4 cannot be accepted unless project 7 is accepted. Surplus funds in year 1 can be shifted to year 2 and funds so shifted can earn a 10 % return. **(10 Marks)**

6 a. What is meant by work schedule? **(03 Marks)**

b. What is simulation analysis? What are the steps involved in simulation analysis? **(07 Marks)**

c. What are the prerequisites for successful project implementation? **(10 Marks)**

7 a. What is meant by abandonment analysis? **(03 Marks)**

b. Explain the procedure adopted for availing a term loan from a financial institution. **(07 Marks)**

c. Given below are the time estimates for various activities of a project.

Activity	Optimistic (t_o)	Most Likely (t_m)	Pessimistic (t_p)
1 – 2	2	5	8
1 – 3	1	4	7
2 – 3	9	9	15
2 – 4	6	9	12
3 – 5	8	11	14
3 – 6	9	12	15
4 – 5	6	9	12
5 – 6	2	5	8
6 – 7	3	3	9

i) Identify the critical path and estimate its mean duration ;

ii) Estimate the standard deviation of the critical path.

iii) What is the probability that the project would be completed within 32 weeks? **(10 Marks)**

8

CASE STUDY

Naveen enterprises is considering a capital project about which the following information is available :

1. The investment outlay on the project will be Rs.100 million. This consists of Rs.80 million on plant and machinery and Rs.20 million on net working capital. The entire outlay will be incurred at the beginning of the project.
2. The project will be financed with Rs.45 million of equity capital, Rs.5 million of preference capital, and Rs.50 million of debt capital. The preference capital will carry a dividend rate of 15% and debt capital will carry an interest rate of 12%.
3. The life of the project is expected to be 5 years. At the end of 5 years, fixed assets will fetch a net salvage value of Rs.30 million, whereas, net working capital will be liquidated at book value.
4. The project is expected to increase the revenues of the firm by Rs.120 million per year. The increase in costs on account of this project is expected to be Rs.80 million per year (this includes all items of costs other than depreciation, interest and taxes). The effective tax rate will be 30%.
5. Plant and machinery will be depreciated at the rate of 15% per year as per the written down value method.

Prepare the project cash flows. **(20 Marks)**

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