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School of Business

Master of Business Administration MBA Dual Specialization
Semester End Examination - May 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - MBFI6018 - Project Appraisal and Finance

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Identify the specific types of machinery and equipment necessary for a manufacturing industry? K3 (6)
- 2) Risk is an inherent aspect of any investment project. Discuss the various sources of risk in project appraisal and finance, including market risk, operational risk, financial risk, and regulatory risk. How can these risks be identified, assessed, and mitigated during the project appraisal process? K4 (8)
- 3) "Imagine you are a senior project manager overseeing a major software development project for a multinational corporation. The project has been ongoing for two years, with significant investments made in development, testing, and marketing. However, during the project's execution, several challenges and concerns have emerged, including delays in deliverables, cost overruns, and shifting market dynamics.
As the project manager, you are tasked with evaluating whether the project should be continued, terminated, or divested. K4 (8)
- 4) Discuss the five forces that shape the profit potential of an industry. K4 (4)
- 5) Alpha Limited is considering two machines, A and B. Though designed differently, they serve the same function. 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. All the figures are expressed in real terms; this means that they represent rupees of constant purchasing power. How should Alpha Limited choose between the two machines? Since they serve the same function, the choice between them should be based on a comparison of costs. Assuming a discount rate of 12 percent. K3 (9)

- 6) Company X, a consumer goods manufacturer, is considering developing a new product line of organic snacks to capitalize on the growing trend towards healthier eating habits. The project involves extensive market research, product development, marketing campaigns, and distribution setup. The initial investment is estimated at \$1.5 million, with expected annual revenues of \$2 million and operating expenses of \$1.2 million. The project's lifespan is projected to be five years. Conduct a financial feasibility analysis of the new product development project, including calculations of net present value (NPV), internal rate of return (IRR), payback period, and profitability index. K5 (10)
- 7) Government policies and regulations can significantly influence project finance and appraisal decisions. Discuss the role of government in project finance, including the various ways in which governments can support or hinder project development through policies, incentives, and regulations. Evaluate the impact of government intervention on project risk, returns, and overall viability. K5 (10)
- 8) Consider a set of five projects: K5 (15)

	Project Investment Outlays	Expected Annual Cash Inflow	Project Life
A	10,000	4,000	12
B	25,000	10,000	4
C	30,000	6,000	20
D	38,000	12,000	16
E	35,000	12,000	9

1. Calculate the Net Present Value (NPV) of each project using a discount rate of 10%
2. Calculate the Profitability Index (PI) for each project.
3. Rank the projects based on NPV, IRR, and PI to identify the most financially attractive options.

9) The economic planning department of a state is considering a proposal to build an 80-mile road from a capital to a village which has hitherto only been accessible by river boat. The road will cost Rs.24 million and the annual maintenance charges will be approximately Rs.1 million. The social discount rate is 10 percent. Analysis suggests that the following effects are likely to result from the completion of the road:

(i) A saving of Rs.0.5 million per year on the cost of shipping agricultural produce from the village and its surrounding area.

(ii) The opening up to development of an additional 50,000 acres of land. Development will cost Rs.3,000 per acre and produce, after 5 years, crops worth Rs.1,000 per acre per year. The land will be settled by small holders, who will move from other employments where their earnings average Rs.1,500 per year. An estimated 8,000 small holdings will be provided. Land cleaning and drainage cost will be borne by the government, and each settlor will receive a grant of Rs.5,000 to assist him in meeting relocation costs. Prior to the time the main crop becomes established, other crops yielding Rs.200 per acre per year can be grown.

(iii) The land after development will be worth Rs.380 million whereas its present value as timber land is just Rs.100 million.

(iv) Tax revenue from the area will be increased by Rs.1 million per year.

(v) Value of timber output will be increased by Rs.20 million in the first year, while the land is being cleared, but will be reduced by Rs. 4 million per year after the clearing.

(vi) The income of boat operators on the river will be reduced by Rs.0.5 million per year. Boats costing Rs.3 million and scheduled for replacement in five years will not be replaced, and the labour displaced will be absorbed elsewhere at equivalent wages. Assume that the road's life is 30 years.

Questions:

1. Which of the effects listed above should be taken into account in the social cost benefit analysis? Should the road be built?(6 marks)

2. What are the direct costs associated with building the road, and what are the annual maintenance charges?(6 marks)

3. What are the costs and benefits associated with opening up additional land for development? Include factors such as development costs, crop yields, relocation grants, and opportunity costs for small holders.(6 marks)

10) Futura Limited is considering a capital project about which the following information is available.

- The investment outlay on the project will be Rs. 200 million. This consists of Rs.150 million on the plant and machinery and Rs. 50 million on net working capital. The entire outlay will be incurred in the beginning.

The life of the project is expected to be 7 years. At the end of 7 years, fixed assets will fetch a net salvage value of Rs. 48 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.250 million per year. The increase in costs on account of the project is expected to be Rs.100 million per year (This includes all items of cost other than depreciation, interest, and tax). The tax rate is 30 percent.

- Plant and machinery will be depreciated at the rate of 25 percent per year as per the written down method.

Estimate the post-tax cash flows of the project.