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IV Semester M.B.A. (Day and Eve.) Degree Examination, December - 2023**MANAGEMENT****Project Management and Analysis****(CBCS Scheme 2019 Onwards)****Paper : 4.2.1****Time : 3 Hours****Maximum Marks : 70****SECTION - A****Answer any Five questions from the following. Each question carries 5 marks.****(5×5=25)**

1. Briefly explain the methods of financing the infrastructure projects.
2. Briefly explain the process of project management.
3. A project involves an outlay of Rs.1,00,000. Its expected cash inflow at the end of year one is Rs.40,000. Thereafter, it decreases every year by Rs.2,000. It has an economic life of 6 years. The certainty equivalent factor is $t = 1 - 0.05t$. Calculate the net present value of the project if the risk-free rate of return is 10 percent.
4. Explain the concept of Public Private Partnership projects.
5. Assume that you are evaluating a 5 years project involving software development. You believe that the technology uncertainty associated with this industry leads to higher discount rate in the future.

Discount rate		14%	15%	16%	18%	20%
Investment cash flow	-12000	4000	5000	7000	6000	5000

6. Why negotiation skills is important for a project managers? Justify.
7. Shimla Municipality is considering two different Snowplows. The gunning plow has an economic life of 12 years, whereas the coulter plow has an economic life of 9 years. The gunning plow costs Rs.2.5 million and is expected to have salvage value of Rs.0.8 million at the end of 12 years. The coulter plow costs Rs.1.5 million and is expected to have salvage value of Rs.0.5 million after 9 years. The operating cost and maintenance costs for the gunning plow are expected to be Rs.0.32 million per year. The plow has identical capacity. Whichever plow is chosen, Shimla Municipality would continue to replace it with essentially the same machine indefinitely. If the discount rate is 12%, which plow should be selected? Ignore taxes.

[P.T.O.]



SECTION - B

Answer any Three questions from the following. Each question carries 10 marks.

(3×10=30)

8. Define venture capital. Elucidate various issues relating to venture capital mechanism in India.
9. Briefly explain the techniques of Risk Analysis.
10. A project is having the following activities and their time estimates:

Activity	Time in Weeks		
	Optimistic	Most likely	Pessimistic
1-2	2	3	10
1-3	3	4	5
2-4	6	8	10
2-5	5	6	7
3-4	5	7	9
4-5	4	5	12

- i) Draw a PERT network for the project.
 - ii) Identify the critical path and calculate the expected time (Arithmetic average time) to complete the project.
 - iii) What is the probability that project will be completed by 15 weeks (for 1.5, area of the normal distribution = 0.0668)
11. ABC Lamps co. is considering an investment project which has an estimated life of 4 years. The cost of project is Rs. 10,000 and the possible cash flows are as follows:

Year I		Year II		Year III		Year IV	
CF	P	CF	P	CF	P	CF	P
2000	.4	3000	.3	4000	.2	2000	.3
3000	.4	4000	.4	5000	.5	3000	.4
4000	.2	5000	.3	6000	.3	4000	.3

The cash flows of various years are independent and the risk-free discount rate (post tax) is 8%. What is the expected NPV?



SECTION - C

Case Study (Compulsory).

(1×15=15)

12. The expected net cash flows of the three projects are as follows:

Year	Project A	Project B	Project C
0	(5000)	(5000)	(5000)
1	3500	1000	15000
2	2500	3000	(10000)
3	1500	4000	—

Suresh Gopal believes that all the three projects have risk characteristics similar to the average risk of the firm and hence the firm's cost of capital, viz. 12 percent, will apply to them. You are asked to evaluate the projects.

- What is payback period and discounted payback period? Find the payback periods and the discounted payback periods of Project A and Project B
 - Calculate the NPVs of projects A, B and C if CoC is 12%.
 - Calculate the IRRs for Projects A, B and C.
 - Calculate the MIRRs for Projects A, B and C assuming that the intermediate cash flows can be reinvested at 12 percent rate of return.
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