

Question Paper Code : 12090

M.E./M.Tech. DEGREE EXAMINATIONS, JANUARY 2022.

First Semester

Construction Engineering and Management

CN 4102 — PROJECT FORMULATION AND APPRAISAL

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define the term project with an example.
2. List two points to be considered in market analysis of projects.
3. List the types of cash flows related to nature of transaction.
4. Differentiate between the terms present value and future value.
5. List any four types of investments available in India.
6. Mention the need for performing risk analysis in project listing two of its methods.
7. Differentiate between the terms share capital and debenture capital with applicability of each.
8. Name two financial institutions in India with their function.
9. Mention two benefits of technology transfer.
10. Expand BOOT and BOLT mentioning the applicability of each.

PART B — (5 × 13 = 65 marks)

11. (a) Discuss the different clearances required for a project along with agencies granting clearance and the stage in which it is to be given.

Or

- (b) Discuss the sources of generating project ideas.

12. (a) Discuss in detail the principles of cash flows in project.

Or

- (b) Bring out the salient features of the following:
- (i) Concept of Time value of money (5)
- (ii) General approach to cash flow estimation of Expansion project and Replacement project. (8)
13. (a) A company is working on three projects. The expected cash flows are as follows:

Initial Investment	Project 1	Project 2	Project 2
	Rs. 1,00,000	Rs. 1,00,000	Rs. 1,00,000
Annual Cash inflows :			
Year 1	Rs. 50,000	Rs. 10,000	Rs. 10,00
Year 2	Rs.50,000	Rs.10,000	Rs.50,000
Year 3	Rs.12,000	Rs.50,000	Rs.40,000
Year 4	Rs.10,000	Rs.30,000	Rs.60,000
Year 5	Rs.10,000	Rs.80,000	Rs.10,000

- (i) Determine for each project: (1) payback period (2) internal rate of return and (3) the NPV, assuming the company's cost of capital as 15%.
- (ii) Rank the project by the payback, NPV and IRR methods of capital budgeting.

Or

- (b) Two mutually exclusive investment proposals are being considered. The following data is available:

Project	A	B
Cost	Rs.12,000	Rs.12,000
Life	2 years	2 years
Cash Flow each year	Rs.9000	Rs.9000
Salvage Value	0	0

Upon further analysis it was found that the cost of project is a certain amount and so is the life of the project. However, the probabilities of cash inflow each year for projects A and B are as follows:

Project A		Project B	
Possible Inflow	Probability	Possible Inflow	Probability
Rs. 4000	0.2	Rs. 6000	0.2
Rs. 8500	0.6	Rs. 8000	0.6
Rs. 12,000	0.2	Rs. 9000	0.2

Assuming cost of capital as 12%, advice the selection of the project.

14. (a) ✓ Discuss the various key financial indicators used to assess the financial viability of projects

Or

- (b) Enumerate the objectives of social cost benefit analysis. (SCBA) of projects. Discuss the stages in UNIDO approach of SCBA.
15. (a) Taking any infrastructure sector, write the need for using PPP in projects. Discuss the objectives, salient features, benefits and limitations of using PPP in projects.

Or

- (b) ✓ Do you think foreign collaborations are a need? Discuss its objectives, types and benefits with limitations.

PART C — (1 × 15 = 15 marks)

16. (a) Taking a proposed project of your choice, prepare a detailed project report bringing out its salient features.

Or

- (b) Government of Tamil Nadu is proposing to construct a dam as an engineer in-charge of the project, identify and discuss the factors to be considered in feasibility study for the project.