

Reg. No. :

**Question Paper Code : 30500**

M.E./M.Tech DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 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 capital investment.
2. In preliminary analysis of a project, what do we consider as ecological part?
3. What are the types of cash flow?
4. What do you understand by cost of debt?
5. State any four reasons for doing project appraisal.
6. Distinguish between risk and uncertainty.
7. List any four different financial institutions that can finance a construction project.
8. What is cost-benefit analysis?
9. What are the advantages of engaging private sector in a infrastructure project.
10. What are the challenges in involving foreign collaboration in a major construction project?

PART B — (5 × 13 = 65 marks)

11. (a) Explain how a construction project is analysed for technical, financial and social considerations. Discuss briefly on each aspect.

Or

- (b) Discuss about project estimates and the consequent techno-economic feasibility of a construction project.

12. (a) (i) Explain time value of money with reference to its importance, influencing parameters and process of computation. (6)

(ii) Find the present-day value. When the amount is compounded annually at 7% interest that would be worth 10,000, two years from now. What would be the value if it is compounded quarterly at the same rate of interest? (4+3)

Or

(b) (i) What is equity and state its importance in assessing a company's financial position? (4)

(ii) A newly formed construction company needs to raise Rs.1.5 million in capital to rent an office and the necessary equipment to run its business. The company raises the first Rs.800,000 by selling stocks, with cost of equity as 5%. The company then sells bonds for the remaining Rs.7,00,000 with cost of debt as 10%. The Construction Company's total market value is Rs.1.5 million, and its corporate tax rate is 25%. Calculate the weighted average cost of capital. (9)

13. (a) Explain NPV, IRR and ARR individually and discuss the differences between them. Mention their importance in making invest decisions for a company.

Or

(b) Compare and explain Indian and international practices of appraisal for project investment.

14. (a) Describe the various options available for obtaining finance for starting and running a construction company.

Or

(b) Explain the complete process of cost-benefit analysis mentioning the limitations and advantages of the task.

15. (a) Explain BOT, BOOT and BOLT with reference to need, applicability and success rate for each them.

Or

(b) Write a detailed essay on technology transfer.

PART C — (1 × 15 = 15 marks)

16. (a) Prepare a detailed feasibility report for a multi lane express way project between two major cities 250km apart, which has to cross a river and a mountain. Consider technical, financial and environmental aspects.

Or

- (b) A multi-storeyed apartment project is envisaged on the outskirts of a metropolitan city. Perform a detailed risk analysis for the project.

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