

Reg. No. :

Question Paper Code : 10457

M.E./M.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2019.

Second Semester

Construction Engineering and Management

CN 5204 — ECONOMICS AND FINANCE MANAGEMENT IN CONSTRUCTION

(Regulation 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate nominal and effective interest.
2. What is an equation time zero for a payment?
3. When does the future worth analysis should be done?
4. Write any two advantages of breakeven analysis.
5. List out the factors which affect the inflation.
6. What is the necessity of doing depreciation analysis?
7. Under what situations mortgage financing can be obtained?
8. What are the various sources of finance?
9. Write any two financial accounting principles.
10. What is a fund flow statement?

PART B — (5 × 13 = 65 marks)

11. (a) Explain with cash flow diagram, why single payment compound amount factor (SPCAF) is used?

Or

- (b) Describe the arithmetic gradient series with cash flow diagram.

12. (a) Alternative-1 : Initial purchase cost = Rs. 3,00,000, Annual operating and maintenance cost = Rs. 20,000, Expected salvage value = Rs. 1,25,000, Useful life = 5 years. Alternative-2: Initial purchase cost = Rs. 2,00,000, Annual operating and maintenance cost = Rs.35000, Expected salvage value = Rs. 70,000, Useful life = 5 years. The annual revenue to be generated from production of concrete (by concrete mixer) from Alternative-1 and Alternative-2 are Rs. 50,000 and Rs. 45,000 respectively. Compute the equivalent present worth of the alternatives at the same rate of interest of 10% per year and find out the economical alternative.

Or

- (b) Explain how the future worth method can be used for comparison of alternatives.
13. (a) The initial cost of a piece of construction equipment is Rs. 35,00,000. It has useful life of 10 years. The estimated salvage value of the equipment at the end of useful life is Rs. 5,00,000. Calculate the annual depreciation and book value of the construction equipment using straight-line method.

Or

- (b) Discuss in detail, how equipment replacement analysis can be done.
14. (a) Explain about the working capital management in detail.

Or

- (b) Discuss about the various sources of long term financing.
15. (a) Describe the various accounting methods for recognition of revenue, cost and profit.

Or

- (b) What is a balance sheet? Describe about it in detail.

PART C — (1 × 15 = 15 marks)

16. (a) The following table presents the information about the financial data of a construction project.

Description of financial data	Amount (Rs.)
Contract amount	3,35,00,000
Original estimated cost of the contract	3,46,50,000
Billed to date	2,57,95,000
Payments received to date	2,34,85,000
Costs incurred to date	2,07,90,000
Costs paid to date	1,84,03,000
Estimated of forecasted cost to complete	1,31,28,500

Calculate the revenue to date for the project using different methods of revenue recognition.

Or

- (b) What is inflation? Explain, how the effect of inflation will affect the future cost of an item?