## B.E. Eighth Semester (Civil Engineering) (C.B.S.)

Construction Economics \& Finance

## P. Pages: 3

NKT/KS/17/7547
Time : Three Hours


Max. Marks : 80

Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Diagrams and chemical equations should be given whenever necessary.
11. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Explain the following :
i) Discounted cash flow.
ii) Time value of money.
b) A company is planning to expand its present business activity. It has two alternative plans for the expansion programme and corresponding cash flows are tabulated below. Each alternative has a life of 5 years and a negligible salvage value. The minimum attractive rate of return for the company is $12 \%$ suggest the best alternative to the company.

|  | Initial Investment | Yearly Revenue |
| :--- | :---: | :---: |
| Alternative 1 | ₹ $5,00,000$ | $₹ 1,70,000$ |
| Alternative 2 | $₹ 8,00,000$ | $₹ 2,70,000$ |

## OR

2. a) Explain the importance of construction and infrastructure in economic development and growth of India?
b) Consider the following cash flow of a project.

| Year | 0 | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash flow | 10,000 | 4,000 | 4,500 | 5,000 | 5,500 | 6,000 |

Find the rate of return of the project.
3. a) What do you understand by Turnkey construction projects? Discuss its nature and importance.
b) A company has two alternatives for satisfying its daily travel requirements of its employees for the next five years :
Alternative 1 : Renting a vehicle at a cost of ₹ $10,00,000$ per year.
Alternative 2 : Buying a vehicle for ₹ $5,00,000$ with an operating and maintenance cost of $₹ 3,50,000$ per year. The salvage value of the vehicle after five years is ₹ $1,00,000$ Select the best alternative based on the present worth method of comparison using the interest of $8 \%$ compound annually.

## OR

4. a) Explain the merits and demerits of division of labour in the construction industry ?
b) Find the net present worth of the following cash flow series Assume $i=15 \%$ compounded annually.

| End of Year | 0 | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash flow $(₹)$ | 10,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |

5. a) Distinguish between Oligopoly and monopoly market structure with reference to construction industry.
b) What is inflation state it's impact.

## OR

6. a) Write explanatory notes on recession and stagflation.
b) Explain the features of monopolistic competitive market structure.
7. a) Explain the sources of finance to the construction companies.
b) Assess the need of FDI in infrastructure development of India.

## OR

8. a) What do you understand by project cash flow? Explain in details.
b) What is technical \& marketing feasibility study.
9. a) Consider the following data :

Current Assets
$₹ \quad 10,00,000$
Current liabilities
₹ 7,00,000
Stocks (inventories)
$₹ \quad 4,00,000$
Calculate current ratio and acid test ratios using above data.
b) Discuss the affordable housing schemes of government of India with their special features.

## OR

10. a) Consider the following data :

Items
Net Sales Fixed assets Inventory Net worth

## ₹

12,00,000
10,00,000
3,00,000
8,00,000

Calculate (I) Net sales to net profit (II) operating ratios (III) Net sales to fixed assets.
b) Explain the elements of balance sheet in the context of construction industry with the help of a specimen.
11. a) What do you understand by working capital ? Discuss the factors which influence working capital.
b) Projected profit and loss account of ABC company.

| Particulars |  |
| :--- | ---: |
| Sales | In lacs. |
| Cost of production |  |
| Raw material |  |
| Wages |  |
| Other production overheads | 12.00 |
| Depreciation | 1.00 |
| Gross profit | 1.20 |
| Administration \& selling overhead | 18.00 |

Net profit
1.20

Stock holding period and credit period
Raw material
2 months
WIP (Work in progress)
Credit allowed to Debtor
Credit enjoyed from supplier
0.5 months

1 month
2 month
1.5 month

Calculate working capital requirement.

## OR

12. a) What is capital structure ? Discuss the relevance of capital structure planning.
b) Explain short term and long term financing.
