

Q.P. Code:13999

80 Marks

3 Hours

Note: 1. Attempt any 4 Questions

2. Assume suitable data, if required

3. Figures to the right indicate marks

4. Attempt sub questions in order

1. a) A contractor has to take a decision whether to bid for a construction project or not. The decision criteria is based on NPV. The project worth is ₹ 300 crores to be completed in 5 years. Based on the tender conditions and the company policy, following information is generated: [14]

- Mobilization Advance: 10% of project worth. Mobilization Advance will be deducted in 3 equal instalments of 6%, 2% and 2% respectively, starting from the first year
- C.E Advance: 5% of project worth. It will be deducted in 2 equal instalments starting from the 2nd year
- Material cost component of the project is 40%. Secured advance against materials brought to site is 60% of the material cost. Secured Advance is accounted in proportion to the yearly bill payable to the contractor. Secured Advance will be deducted in 3 equal instalments from the running bills starting from the 2nd year
- Contractor has to pay 3% as Performance Security in the beginning and 3% Retention amount, which are deductible from each running bill. Performance Security will be released after the end of the project during the 6th year and retention amount will be released in the 7th year at the end of defects liability period.
- the yearly bills payable to the contractor including the retention amount are as follows:

| Year | Amount (in crore ₹) |
|------|---------------------|
| 1 | 60 |
| 2 | 65 |
| 3 | 85 |
| 4 | 50 |
| 5 | 40 |

- Net profit from the above project before deduction of taxes is 12%. Profit is accounted yearly in proportion to the bill amount
- Income tax is charged at 25%. Working capital required to be raised is estimated at 10%. Working capital may be divided in the proportion of yearly bill. Interest on the working capital is 12% (simple interest). Repayment of working capital is to be considered in the 6th and 7th year together with its simple interest
- Consider the cost of capital as 15%
- Estimated cost of the defects arising during d.l.p is 1.5% of the project worth

Prepare a cash flow statement for the contractor over the 7 year period. Represent the total yearly inflows and outflows w.r.t time graphically and identify whether additional funds may become necessary. Based on NPV, suggest whether the investment in the above project is feasible or not.

- b) As a finance manager in a cement factory how you prepare balance sheet with suitable example? [06]

2. Compare and contrast between: [20]

- Preference Shares and Debentures
- Short term finance and Long term Finance
- ARR and IRR
- Escrow Account and Conventional Account

[TURNOVER

3. a) How BOT is effective model for financing in Dam project in India. [06]
- b) The estimated cost of an expressway to be constructed on BOT basis between 2 megacities is ₹ 2897 crores. The project is to be completed in 4 years and the expected life of the project after vehicles start plying on it is 25 years; after which it needs to be scrapped off and replaced. The commissioning period for the contractor is 10 years, after which the project becomes government property. The contractor had taken a bridging loan of ₹ 500 crores (on simple interest of 12%p.a) at the start of the project which is to be repayed back between the years 6-10 of the project life cycle in equal yearly instalments. The cashflows at the end of each years are estimated as follows: [14]

| Year No. | Construction costs | Expected Toll to be collected | Expected Repairs and maintenance | Year No. | Expected Toll to be collected | Expected Repairs and maintenance |
|----------|--------------------|-------------------------------|----------------------------------|----------|-------------------------------|----------------------------------|
| | In crore ₹ | In crore ₹ | In crore ₹ | | In crore ₹ | In crore ₹ |
| 0 | | | | 15 | 1050 | 300 |
| 1 | 732 | | | 16 | 960 | 330 |
| 2 | 884 | | | 17 | 970 | 360 |
| 3 | 829 | | | 18 | 980 | 390 |
| 4 | 452 | | | 19 | 990 | 420 |
| 5 | | 800 | 115 | 20 | 1300 | 450 |
| 6 | | 820 | 130 | 21 | 1015 | 490 |
| 7 | | 840 | 145 | 22 | 1030 | 530 |
| 8 | | 860 | 160 | 23 | 1045 | 570 |
| 9 | | 880 | 175 | 24 | 1060 | 610 |
| 10 | | 900 | 390 | 25 | 1375 | 650 |
| 11 | | 910 | 210 | 26 | 1090 | 700 |
| 12 | | 920 | 230 | 27 | 1000 | 750 |
| 13 | | 930 | 250 | 28 | 900 | 800 |
| 14 | | 940 | 270 | 29 | 750 | 700 |

Determine, based on NPV, whether the project is feasible for both the project parties. Also show the BEP of the project

- 4 a) As a manager how you define the objectives of your firm and what introductory perusal needed with suitable example? [06]
- b) Prepare check list for project appraisal for construction of new airport in Navi Mumbai [06]
- c) The cost of machine A and B are ₹ 5,26,500 each. Estimated life of both machines is five years. Income generated form both machines is given in table below: [08]

| Year No. | Project A in lakh ₹ | Project B in lakh ₹ |
|----------|------------------------|------------------------|
| 1 | 1,30,500 | 1,44,850 |
| 2 | 1,28,950 | 1,26,550 |
| 3 | 1,17,200 | 1,19,250 |
| 4 | 1,06,250 | 1,10,200 |
| 5 | 1,04,850 | 1,10,000 |

Find out

- Average rate of return on A and B machines.
- Which machines is better from the point of view of payback period and why?
- Calculate average rate of return when salvage value of machine A turns out to be ₹ 10,000 and when B machine has zero salvage value.

5. a) Summarized below are the income and expenditure forecast for the months of July to December 2017. [10]

| Month (all credit) | Sales (all credit) | Purchase | Wages | Manufacturing expenses | Office expenses | Selling expenses |
|-----------------------|-----------------------|----------|--------|---------------------------|--------------------|---------------------|
| | ₹ | ₹ | ₹ | ₹ | ₹ | ₹ |
| July | 5,00,000 | 3,90,000 | 85,000 | 50,000 | 20,000 | 40,000 |
| August | 6,20,000 | 3,70,000 | 95,000 | 40,000 | 25,000 | 45,000 |
| September | 6,40,000 | 3,60,000 | 45,000 | 45,000 | 25,000 | 50,000 |
| October | 5,90,000 | 3,60,000 | 85,000 | 45,000 | 20,000 | 45,000 |
| November | 5,70,000 | 3,80,000 | 95,000 | 50,000 | 25,000 | 40,000 |
| December | 6,00,000 | 3,50,000 | 85,000 | 40,000 | 20,000 | 55,000 |

You are given the following further information:

- Plant costing Rs. 3,60,000 is due for delivery, in November, payable at 10% on delivery and the balance after 3 months.
- Advance tax of ₹ 55,000 is payable in July and October each.
- Period of credit allowed by suppliers is 2 months and to customers is 1 month.
- Lag in payment of manufacturing expenses is $\frac{1}{2}$ month.
- Lag in payment of all other expenses is 1 month.

You are required to prepare a cash budget for 3 months starting on 1st September 2017, when there was a cash balance of ₹ 1,00,000

- b) Innumerate the various ways in which the funds were raised from conception to completion of the Konkan Railway project. Discuss the hurdles faced and the solutions determined thereof. In your opinion, is the case study an example of financial success or a financial failure? Justify. [10]
6. Write short notes (any 5): [20]
- CIDC-ICRA grading system of construction entities
 - Role of lender's Engineer for execution of a major construction project
 - Working capital cycle
 - Mergers and acquisition with examples
 - Profit and loss account statement
 - "Cash Budget" as a tool of planning