

06/2016

S.E- III Sem - Chem
Chemical Engineering Economics

(18)

SE/III/CBGS/CHEM/CEE
QP Code : 30780

(3 Hours)

[Total Marks : 80

- N.B. : (1) Question No. 1 is compulsory. Answer any three from remaining five questions.
- (2) Assume any suitable data if required and specify the assumptions clearly.
- (3) Draw neat sketches and flowcharts wherever required.
- (4) Answer to the sub-questions of an individual question should be grouped and written together i.e. one below the other.

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| 1. | (a) Explain concept of balance sheet. | 5 |
| | (b) Define depreciation. Differentiate between physical and functional depreciation. | 5 |
| | (c) Discuss the various determinants of supply. | 5 |
| | (d) Explain the concept of Fixed capital investment and working capital investment in capital investment. | 5 |
| 2. | (a) A person wants to borrow as much money as possible today with an annual payment of Rs. 15000 at the end of each year of 15 years. If he is charged 9% interest compounded annually, how much money could he borrow today? | 10 |
| | (b) Explain various types of market. | 10 |
| 3. | (a) Two pumps, pump A and pump B are being considered for pumping water from reservoir. Pump A has installed cost of Rs. 20000 and salvage value of Rs. 2000, while Pump B has installed cost of Rs. 25000 and salvage value of Rs. 4000. Both the pumps have same capitalized cost. If pump A has service life of 4 years determine the service life of pump B. Annual effective interest rate is 15%. | 12 |
| | (b) Explain various levels of capital cost estimation. | 8 |
| 4. | (a) A company has following assets and liabilities:
Cash in bank - Rs. 355000, Accounts receivable - Rs. 85000, Debts due within 1 year Rs. 20000, Machinery Rs. 300000, Furniture Rs. 100000, Govt. Bonds - Rs. 200000, Accounts payable -125000. Then calculate total current asset, total fixed asset, current ratio, cash ratio and working capital for this company. | 10 |
| | (b) Discuss various types of taxes. | 10 |
| 5. | (a) Explain any four profitability evaluation methods. | 12 |
| | (b) Give the break-up of Total Product Cost. | 8 |
| 6. | (a) The total capital investment of one manufacturing plant is Rs. 120000000 and working capital investment is Rs. 20000000. If plant produces 12000 kg of product per day in a 365 - day year, what selling price in Rs. Per kg of product would be necessary to give a turnover ratio of 1.6? | 10 |
| | (b) Explain about ordinary and exact simple interest. | 5 |
| | (c) Write short note on cost index. | 5 |