CBCS SCHEME

USN | | | | | | | | | |

15MA61

Sixth Semester B.E. Degree Examination, June/July 2019
Engineering Economics

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Differentiate between institution and analysis. **(04 Marks)**

b. With a neat sketch, explain the problem solving and decision making process. **(07 Marks)**

c. Explain the law of demand and supply with a neat sketch. **(05 Marks)**

OR

2 a. List the factors influencing the demand and supply. **(07 Marks)**

b. Explain:
i) Causes for increasing returns
ii) Causes for constant returns
iii) Causes for diminishing returns. **(09 Marks)**

Module-2

3 a. Explain simple interest and compound interest and write the differences between simple interest and compound interest. **(04 Marks)**

b. Explain cash flow diagram with the graphical representation and list the conventions of cash flow diagram. **(04 Marks)**

c. A person takes a loan of Rs.10,000 from bank at interest of 10% P.A. Find the amount if
i) Interest compounded annually
ii) Interest compounded half yearly
iii) Interest compounded quarterly
iv) Interest compounded monthly. **(08 Marks)**

OR

4 a. An utility is purchased for an amount of Rs.17,500/- and it is expected to serve for 4 years. If the interest rate are 6% for simple interest and 10% for compound interest care. Calculate the interest earned in both the cases. **(06 Marks)**

b. Find the effective rate of interest for an annual rate of interest of 10% when compounded:
i) Yearly
ii) Biannually
iii) Quarterly
iv) Monthly
v) Daily
vi) Hourly
vii) Continuously. **(10 Marks)**

Module-3

5 a. An entrepreneur wants to buy a milling machine. He has 3 alternatives. The initial investment, annual revenues, salvage value and the economic lives of 3 alternatives are given below. Select the best alternative using present worth comparision method, rate of interest is 14% per annum. **(10 Marks)**

Alternative	I I (Rs)	A R (Rs)	S V (Rs)	Life
1	25000	10000	4000	7
2	45000	15000	6500	7
3	7000	20000	9000	7

b. Rs.10 crores was granted by the management of the engineering college for the construction of its new mechanical science block. Annual maintenance for the block is estimated to be Rs.10 lakh. In addition Rs.12 lakhs will be needed every 10 years for painting and major repairs. If the budget granted is to take care of perpectual maintenance, how much of the amount can be used for initial construction cost? Deposited funds can earn 6% rate of interest compounded annually. Assume that taxes and inflation do not come into picture. **(06 Marks)**

OR

6 a. Consider the following two mutually exclusive alternative X and Y.

\	Initial Investment	1	2	3	4
X	-2,50,000	1,00,000	1,00,000	1,00,000	1,00,000
Y	-3,00,000	1,40,000	1,10,000	90,000	1,00,000

Select the best alternative based on future worth method of comparision if the rate interest is 9.75% compounded annually. **(09 Marks)**

b. The following alternative can perform the same function. Suggest the best alternative based on annual worth method of comparision when i = 12%.

Alternative	First cost (Rs)	Life (yrs)	Salvage value (Rs)	Annual cost (Rs)
A	6000	6	2000	800
B	3000	3	1000	1000
C	2000	3	0	1200

(09 Marks)

Module-4

7 a. A person is planning a new business. The initial outlay and cash flow pattern for this new business are listed below. The expected life of the business is 5 years. Find the rate of return for the new business. **(10 Marks)**

Period	0	1	2	3	4	5
Cash flow	-1,00,000	30,000	30,000	30,000	30,000	30,000

b. Briefly explain the causes of depreciation. **(06 Marks)**

OR

8 a. Briefly explain the determination of selling price of a product with a block diagram. **(08 Marks)**

b. Determine the selling price of a gear wheel from the following data given below:

i) Number of units of item produced = Rs.200
ii) Labour cost = Rs.2500
iii) Material cost = Rs.3800
iv) Factory over heads = 40% of direct cost
v) Administrative and selling overheads = 25% of factory cost
vi) Profit is 30% of total cost.

(08 Marks)

Module-5

9 a. Explain the objectives of financial statement. **(06 Marks)**

b. Following is the financial status of a company as on 31st March 2018.
Share capital – Rs.20 lakh
Bills receivable – Rs.50,000
Provision for dividend – Rs.30,000
Unclaimed dividend – Rs.20,000
Creditors – Rs.70,000
Debentures – Rs.3,00,000
Land building and equipment – Rs.20 lakhs
Loans – Rs. 2 lakh
Stocks – Rs.3,45,000
Bank balance – Rs.1 lakh
Provisions of tax – Rs.1.4 lakh
Bills payable – Rs.0.5 lakh
Debtors – 1.1 lakh
Reserve – Rs.5 lakh
Investment – Rs.7 lakh
Prepare balance sheet as on 31st March 2018. **(10 Marks)**

OR

10 a. Briefly explain the importance and objectives of profit planning. **(08 Marks)**

b. The expenses for the budgeted production for the product X in a factory are as follws:
Materials – Rs.70
Labour – Rs.25
Variable OH – Rs.20
Fixed OH – Rs.1 lakh (10,000)
Variable expenses – Rs.5
Selling expenses – Rs.5
Distribution expenses – 7
Administration expenses – Rs.5
Total cost per unit – Rs.155
Prepare the budget for 6000, 8000, 10000 units. **(08 Marks)**

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