

Bachelor of Mechanical Engineering Examination, 2023
(4th Year, 2nd Semester)
Engineering Economics and Costing

Time: Three Hours

Full Marks: 100

Different parts of the same question should be answered together

Answer any five questions. (Only first five answered questions shall be examined.)

5 x 20 = 100

1. Write short notes on any four of the following: **4 x 5**
a) MRTS, b) central problems of an economy, c) expansion path, d) assumptions of utility, e) price elasticity of demand.

2. How does 'scarcity' impact economic decision making? Describe in your own words importance of economics for engineers. Explain the concept of comparative advantage of countries from economic point of view. Describe in your own words law of returns. Summarise external economies of scale. **3 + 3 + 3 + 6 + 5**

3. Summarise partnership organisations. Describe types of joint ventures in India. Explain forms of mergers. **8 + 6 + 6**

4. Prepare journal entries, ledger entries and the respective month-end trial balance **5 + 10 + 5**
 - a) On 1/1/23, Mahendra opened a company called Mahendra Forging Co. with a fund of Rs. 50 lakh.
 - b) On 3/1/23, rented an office and workshop in cash for Rs. 2 Lakh per month.
 - c) On 15/1/23, purchased machineries for Rs. 10 lakh on credit.
 - d) On 25/1/23, made sales of Rs. 35 Lakh on credit.
 - e) On 31/1/23, paid wages & salaries of Rs. 1 lakh through NEFT

5. Develop a cost sheet from the following particulars in the book of Saraswati Publishers (in '000 rupees): **20**

Raw materials purchased = 1,20,000	Paid inward freight charges = 10,000
Wages paid to labourers = 30,000	Directly chargeable expenses = 5,000
Salesman's salary = 6,000	Office insurance = 1,000
Cost of moulds = 3,000	Factory manager's salary = 1,000
Depreciation on machinery = 800	Office salary = 9,000
Directors' fees = 2,000	Showroom expenses = 1,200
Telephone charges = 700	Depreciation on office building = 800
Distribution centre's godown exp. = 800	Market research expenses = 600
Expenses of delivery van = 1,500	
Sales = 2,10,000	

	Opening stock	Closing stock
Raw materials	12,000	20,000
Work in progress	17,500	24,000
Finished goods	40,000	50,500

[Turn over

6. From the following extracts of Trial Balance of Mahakal Rudraksha Traders as on 31- March-2023, draw the final accounts from the balances there from (Trading A/c, P&L A/c, and year-end Balance Sheet):

Capital	Rs. 1,50,000	Stock (1 st April, 2022)	Rs. 30,000
Cash at bank	Rs. 10,000	Cash in hand	Rs. 5,000
Machinery	Rs. 10,000	Furniture	Rs. 13,000
Purchases	Rs. 2,00,000	Wages	Rs. 50,000
Carriage inward	Rs. 33,000	Salaries	Rs. 70,000
Discount allowed	Rs. 4,000	Discount received	Rs. 5,000
Advertising expenditure	Rs. 50,000	Office expenses	Rs. 40,000
Sales	Rs. 5,00,000	Sundry debtors	Rs. 90,000
Sundry creditors	Rs. 40,000		

Value of stock as on 31st March, 2023 was Rs. 50,000.

8 + 7 + 5

7. Compare the following two mutually exclusive projects on the basis of NPV and IRR (with critical comments). Cash flows and salvage values are in crore of rupees. The minimum required annual return is 10%,

7 + 13

Year	Project A				Project B			
	0	1	2	3	0	1	2	3
Cash Outflow	220				198			
Cash Inflow		91	130	105		87	110	84
Salvage Value				20				36