Bachelor of Power Engineering Examination, 2022

(2nd Year, 2nd Semester)

Engineering Economics and Costing

Time: Three Hours **Full Marks: 100**

Different parts of the same question should be answered together

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1. Answer any two from (a), (b) and (c) in this block **15 x 2 = 30**

(a) Write short notes on any three of the following: **5 x 3**
(i) Cobb-Douglas production function; **(ii)** Price control; **(iii)** Assumptions of utility; **(iv)** Law of demand and determinants of demand; **(v)** Law of returns

(b) Classify and describe internal economies of scale. **4 + 11**

(c) Which factors impact market structure? Under which condition a firm called to be in equilibrium? Explain oligopoly. **4 + 1 + 10**

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2. Answer any two from (a), (b) and (c) in this block **10 x 2 = 20**

(a) What is a joint venture? How is it governed in India? Explain the approval process of FDI in India through joint ventures. Enumerate types of joint ventures. **2 + 3 + 3 + 2**

(b) Define international business. Describe the characteristics of international business. **2 + 8**

(c) State objectives of WTO and functions of WTO. **5 + 5**

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3. Answer any two from (a), (b) and (c) in this block **15 x 2 = 30**

(a) From the following balances extracted from the books of Agni Co., **prepare a trading account, a profit and loss account** for the year ending 31st December, 2021, and a **balance sheet** as on 31st December, 2021. **5 + 5 + 5**

	Rs.		Rs.
Stock on 1st January, 2021	11,000	Returns outwards	500
Bills receivables	4,500	Trade expenses	200
Purchases	39,000	Office fixtures	1,000
Wages	2,800	Cash in hand	500
Insurance	700	Cash at bank	4,750
Sundry debtors	30,000	Rent and taxes	1,100
Carriage inwards	800	Carriage outwards	1,450
Commission (Dr.)	800	Sales	60,000
Interest on capital	700	Bills payable	3,000
Stationary	450	Creditors	19,650
Returns inwards	1,300	Capital	17,900

Note: The stock on 31st December, 2021 was valued at Rs.25,000.

PTO

(b) A mechanical device with an economical life of 5 years will cost Rs. 50,000 for purchase. Maintenance will cost Rs. 2,000 per year starting from the 1st year. The device will generate revenues of Rs. 12,000 each year. There will be an upgradation cost of Rs 10,000 for the device at the end of 3rd year. Salvage value will be Rs 20,000. If the required rate of return is 10%, should the device be purchased based on

(i) NPV? **5**

(ii) IRR? **10**

(c) From the following list of transactions prepare appropriate journal entries, ledger entries and the relevant month- end trail balance **4 + 8 + 3**

(i) On 2/1/22, Lakshmi Narayanan started a business called, Maha Laxmi Traders, with an investment of Rs.50 lakh and another Rs. 50 lakh as short term loan.

(ii) On 5/1/22, acquired building properties (Fixed Assets) for Rs. 50 Lakh in cash.

(iii) On 10/1/22, purchased inventories of Rs. 20 Lakh in cash.

(iii) On 31/1/22, made sales of Rs 20 Lakh on credit.

(iv) On 31/1/22, converted 40 % of the short-term loan into long-term loan.

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4. Answer any one from (a) and (b) in this block **20 x 1 = 20**

(a) Prepare a cost sheet from the following extracts of Rabi Co.: **20**

	Amount (Rs.)		Amount (Rs.)
Direct Materials	1,00,000	Consumable Stores	2,500
Direct Wages	30,000	Manager's Salary	5,000
Wages of Foreman	2,500	Directors'Fees	1,250
Electric Power	500	Office Stationery	500
Lighting Factory	1500	Telephone Charges	125
Lighting Office	500	Postage	250
Storekeeper's Wages	1,000	Salesmen's Salary	1,250
Oil and Water	500	Travelling Expenses	500
Rent Factory	5000	Advertising	1,250
Rent Office	2,500	Warehouse Charges	500
Factory Plant Repairs	3,500	Sales	1,89,500
Transfer to Reserves	1,000	Carriage Outward	375
Discount on Shares Witten Off	500	Dividend	2000
Depreciation: Plant Factory	500		
Depreciation: Office	1,250		

(b) For the production of 10,000 units of Surya Company, the following is the budgeted expenses:

	Rs. per unit
Direct materials	30
Direct labour	15
Variable overhead	12.50
Fixed overhead	7.50
Variable expenses (direct)	2.50
Selling expenses (10% fixed)	7.50
Administration expenses (Rs. 25,000 fixed for all levels of production)	2.50
Distribution expenses (20% fixed)	2.50
Total cost of sales per unit	80.00

Develop a flexible budget for 14,000 units of production and compare with that of 10,000 units of production with critical comments. **15 + 5**