

Bachelor of Mechanical Engineering Examination, 2018(Part Time, 4th Year, 2nd Semester)**Engineering Economics and Costing**

Time: Three Hours

Full Marks: 100

Answer any five questions. Only first five answered questions shall be examined; the rest shall be ignored.

1. Write short notes on any four of the following: 5 x 4
 (a) Central problems of an economy, (b) Features of monopoly, (c) Marginal rate of technical substitution,
 (d) Law of supply and determinants of supply, (e) Assumptions of utility, (f) Price discrimination. .
2. Define 'Economies of Scale'. Summarise 'Internal Economies of Scale'. What does 'External Economies of Scale' mean to you? Explain classifications of 'External Economies of Scale'. 2 + 7 + 2 + 9
3. (a) Define standard costing. 2
 (b) Contrast standard costing with budgetary control. 8
 (c) Summarise roles of Reserve Bank of India. 10
4. (a) A mechanical device with an economical life of 7 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 up gradation cost of Rs 10,000 for the device at the end of fourth year. Salvage value will be Rs 20,000. If the required rate of return is 10%, should the device be purchased based on NPV? 10
 (b) What does Ratio Analysis mean to you? 2
 (c) Explain the significance of Ratio Analysis? 8
5. (a) Prepare a flexible budget for production of 12,000 units from the following information: 10

The expenses budgeted for production of 10,000 units in a factory are furnished below:

	Per unit in Rs
Material cost	65
Labour cost	25
Variable factory over head	20
Fixed factory over head (Rs. 3,00,000)	30
Variable expenses(Direct)	14
Selling expenses (30% fixed)	20
Distribution overhead (10% fixed)	10
CEO's salary (Rs. 60,000)	6
Other administration expenses (Rs,150,000)	15

- (b) Explain FDI approval process through joint ventures. Enumerate advantages & disadvantages of joint stock companies. 3 + 7
6. Prepare a cost sheet in the book of Durga Co. Pvt. Ltd. from the following particulars: (use proper format, and show calculations separately) 20

	Rs. ('000)		Rs.('000)
Opening stock		Power (factory)	2,000
Raw – materials	5,000	Factory heating and lighting	2,000
Finished goods	4,000	Factory insurance	1,000

Closing stock		Experimental Expenses	500
Raw – materials	4,000	Sales of wastage of materials	200
Finished goods	5,000	Office management salaries	4,000
Raw – materials purchased	50,000	Office printing and stationery	200
Wages paid to labourers	20,000	Salaries of salesmen & commission of travelling agent	2,000
Chargeable expenses	2,000	Sales	1,00,000
Factory rent & taxes	5,000		

7. The following trial balance was taken from the books of Lakshmi Co. on December 31, 2016. All amounts are in Rupees.

Cash	13,000	
Sundry debtors	10,000	
Bill receivable	8,500	
Opening stock	45,000	
Building	50,000	
Furniture and fittings	10,000	
Investment (Temporary)	5,000	
Plant and Machinery	15,500	
Bills payable		9,000
Sundry creditors		20,000
Lakshmi's capital		78,200
Lakshmi's drawings	1,000	
Sales		100,000
Sales discount	400	
Purchases	30,000	
Freight inward	1,000	
Purchase discount		500
Sales salary expenses	5,000	
Advertising expenses	4,000	
Miscellaneous sales expenses	500	
Office salary expenses	8,000	
Misc. general expenses	1,000	
Interest income		1,000
Interest expenses	800	
	<u>2,08,700</u>	<u>2,08,700</u>

Closing stock on December 31, 2016 was Rs.10,000

Prepare a trading account, profit and loss account, and an end of year balance sheet from the above trial balance in report form.

6 + 6 + 8