[This question paper contains 4 printed pages.]

Your Roll No.

3309

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B.Tech. (ME/CE)/I

Paper EME/ECE-104—ENGINEERING ECONOMICS AND ACCOUNTANCY

Time: 3 Hours Maximum Marks: 70

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt three questions from Group A and two questions from Group B.

Group 'A'

- (a) State the law of demand and show it through a demand schedule and a demand curve. What are the exceptions to the law of demand?
 - (b) What do you mean by Price elasticity of demand? How is it different from Income elasticity of demand? From the demand function Q = 600/P, show that total expenditure on the commodity remains unchanged as price falls. Estimate elasticity of demand along the demand curve at P = Rs. 4 and P = Rs. 2.
- (a) What is meant by utility? Distinguish between Total
 utility and the Marginal utility. Show that the total
 utility is maximum when marginal utility equals
 zero.

- (b) A manufacturer believes that his sales (Y) are mostly influenced by cost (X) and the equation is Y = a + bX. According to business data ΣY = 73, ΣX = 70, ΣXY = 1063, ΣX² = 1042. With the help of regression technique, find the value of 'a' and 'b'. Also point out what is significance of this technique in economic analysis.
- 3. (a) Under what conditions are isoquants convex to the origin? Suppose there are some commodities which can be produced with only labour, with only capital or with combination thereof? Draw an isoquant for this kind of productive activity? How does the MRTS behave?
 - (b) Do you agree that Perfect Competition is a hypothetical situation?
 The demand function faced by a firm is Q = 50 0.5P and its total cost function is TC = 10 + 0.5Q². Find the output at which the profit of the firm will be maximum. And also find the price it will charge. 7
- 4. (a) Define average and marginal cost of a variable input. When marginal cost begins to decline, what happens to the average cost?
 - (b) How are the revenue and cost curves under monopoly different from those under perfect competition? How are Average Revenue (AR) and Marginal Revenue (MR) curves related to one another?

Group 'B'

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5.	(a) What do you understand by Cost Accoun	nting ? 7
	(b) Explain briefly the different elements	of cost.
	Suggest some measures for cost reduction	on. 7
6.	What do you mean by Cost-Sheet? How is it ;	prepared?
	Prepare a Cost-Sheet for the month ended	on 30th
	December, 2009 of Prasad Ltd.:	14
	Particulars	Rs.
	Raw materials: Existing Stock	7,000.00
	Purchases	15,000.00
	Closing Stock	5,000.00
	Direct wages	25,000.00
	Direct expenses	15,000.00
	Factory rent, insurance, lighting suspension	35,000.00
	Cost of Plant and Machinery	12,000.00
	Indirect wages	20,000.00
	Advertisement and Publicity	2,000.00
	Salesman travelling expenses	2,000.00
	Salary of office staff	10,000.00
	Telephone and Postage	2,000.00
	Audit fee	4,000.00
	Profit 10% of T	otal Cost