

Please check that this question paper contains 09 questions and 02 printed pages within first ten minutes.

[Total No. of Questions: 09]

[Total No. of Pages: 02]

Uni. Roll No.

Program: B.Tech.

Semester: 1/2

Name of Subject: Principles of Engg. Economics and Mgt.

Subject Code: HSMC-103

Paper ID: 15928

Time Allowed: 02 Hours

Max. Marks: 60

NOTE:

14-07-21(M)

- 1) Each question is of 10 marks.
- 2) Attempt any six questions out of nine
- 3) Any missing data may be assumed appropriately

- Q1** “Demand depends on many factors” comment. Draw the diagrams and explain Various **degrees** of elasticity of demand
- Q2.** “Under static conditions, every factor including the entrepreneur would get remuneration equal to its marginal product”. Comment and explain assumptions of **Marginal Productivity Theory of Distribution** .
- Q3.** (a) Calculate economic order quantity(**EOQ**) and number of orders when consumption =4,00,000 units ,ordering cost=Rs 40 per unit and carrying cost=Rs 2 per unit
 (b) **Calculate profits and sales** when : cost of production is Rs 1,90,500 ,selling and Distribution overheads are 30% of cost of production and profits are 25% on sales. (5+5)
- Q4.** (a) Draw the diagrams of properties of Indifference curves and give reasons for the same .
 (b) Explain the relationship among marginal product , average product and total product and draw the diagram of law of variable proportions . (5+5)
- Q5.** **Draw Breakeven Chart from the following data and also verify numerically**
 Fixed cost = RS 2,50,000 ; Variable Cost =RS 20 per unit; Selling price =RS 45 per unit .
- Q6.** From the following data Prepare a Cost Sheet and calculate profits.

Particular	Amount(in rupees)	Particular	Amount(in rupees)
Opening stock of Raw Material	1,60,000	Opening stock of Work In Progress	3,00,000
Opening stock of Finished Goods	70,000	Office Appliances	19,000
Plant and Machinery	3,70,000	Buildings	1,80,000
Sales	8,98,000	Sales Returns	10,000
Material purchased	3,28,000	Freight on materials purchased	12,000
Purchase returns	5,800	Direct labour	1,70,000
Indirect labour	19,000	Factory supervision	11,000
Factory repairs	17,000	Heat, light & power	75,000
Carriage outwards	2,000	Sales travelling	9,000
Sales Promotion	20,800	Distribution department salaries & wages	17,000
Office salaries	9,600	Closing stock of Raw Material	1,70,000
Closing stock of Work In Progress	1,86,000	Closing stock of Finished Goods	1,05,000

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Depreciation should be provide as 5% on OfficeAppliances,10% on Machinery and 4% on Buildings. Heat, light and power are to be distributed in the ratio of 8:1:1 among factory, office and selling & distribution respectively.

Q7. “Select the best project by Net Present Value method and give reason for the same (estimated life of the projects is 5 years)

Cash inflows of project A	Cash inflows of project B	Net Present Value of Re.1 @ 10% discounting factor
Rs 1,80,000	Rs 160,000	0.909
Rs 1,60,000	Rs 1,40,000	0.826
Rs 1 25,000	Rs 1,05,000	0.751
Rs 95,000	Rs 90,000	0.683
Rs 75,000	Rs 70,000	0.621

Project A : Initial investment of the project =Rs 4,00,000

Project B : Initial investment of the project =Rs 350000

Q8. Rank the projects from the following data according to Pay Back Period Method .
 Initial investment required for the project A =Rs 2, 00,000 ,
 Initial investment required for the project B =Rs 2, 50,000
 Net profits before tax and after depreciation are as follow

Year	Project A	Project B
1st	Rs 100,000	Rs 1,20,000
2nd	Rs 70,000	Rs1,00,000
3rd	Rs 45,000	Rs 90,000
4 th	Rs 90,000	Rs 95,000
5	Rs 70,000	Rs 75,000

Q9. “Management is getting things done through others” comment with the help of Henri

Fayol's Principles of Management .
