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2021

B.Tech. 5th Semester End-Term Examination

All

ENGINEERING ECONOMICS

(New Regulation & New Syllabus)

Full Marks – 70 Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question No. 1 and any *four* from the rest.

GROUP A

1. Fill in the blanks with appropriate words given in the brackets: $(10 \times 1 = 10)$

   (i) 'Principles of Economics' was written by ———— (Robbins /Marshall / Adam Smith)

   (ii) Robbin's definition is known as ———— (welfare definition / scarcity definition / growth definition) of economics.

   (iii) Theory of business cycle falls within the domain of ———— (micro economics / macroeconomics / public finance).

   (iv) Bombay Stock Exchange was formed in the year ———— (1987 / 1877 / 1908)

   (v) For essential goods income elasticity of demand is ———— (greater than one / less than one / equal to one)

   (vi) Cross elasticity of demand for complement goods is ———— (positive /negative /zero)

   (vii) Price discrimination is a feature of ———— (monopoly market / perfect competition / oligopoly market)

   (viii) Income tax is a kind of ———— (progressive tax /regressive tax /proportional tax)

[Turn over

(ix) 'G' in the supply function stands for ———— (goal of the producer / state of technology / input prices).

(x) 'PT' in the Fisher's quantity theory of money denotes ———— (supply of money / demand for money / velocity of money).

GROUP B

Answer any *four* questions.

2. Write any *three* of the following : (5 × 3 = 15)

(a) Show how the Phillips Curve traces the relation between inflation and unemployment.

(b) Define marginal utility and derive utility function.

(c) Show the relations between AR, MR and elasticity of demand.

(d) Prove that an indifference curve is downward sloping and convex to the origin.

(e) Write the concept of G.N.P. at market price, N. N. P. at market price and N. D. P. at market price.

3. (a) From the following data calculate total cost, average variable cost, average fixed cost and marginal cost. (3)

Total output (units) :	0	15	25	35	45
TFC (RS):	400	400	400	400	400
TVC (RS):	0	200	250	300	500

(b) The sale record of an industry reveals the following. Estimate sales for the next three years. (5)

Year :	1988	1990	1992	1994	1996	1998
Sale in lakh of Rs.	30	40	45	50	48	57

(c) Calculate weighted average of relative index from the following data. (3)

Commodity :	Sugar	Potato	Dal	Rice
Weight :	5	4	2	3
Base year price (in kg.)	15	20	45	25
Current year price:	25	30	65	45

(d) If $(q+10)(p+5) = 256$ and $q - p + 5 = 0$ are the demand and supply functions of a commodity then calculate price and quantity of the commodity. (4)

4. (a) Define perfect competition. Explain how price and output are determined under perfect competition. (3 + 7=10)

(b) The supply and demand of a commodity are given as S=200+2P and D=300 – 3P. Calculate the equilibrium price and quantity of the commodity. When the specific subsidy of Rs. 3 per unit is offered then calculate the new equilibrium value. (5)

5. (a) What is monopoly market? Show with the help of a diagram how price and output are determined under monopoly market. (3 +7= 10)

(b) The demand and cost functions of a monopoly firm are given as Q= 20–2p and C=5Q +0.5Q. Calculate the level of output and price of the firm. (5)

6. (a) Discuss the various functions of the Central Bank of India. (7)

(b) Explain the various monetary measures of the Central Bank to control inflation in the economy. (8)

7. (a) Define budget. Explain the various components of budget. (2+ 6= 8)

(b) Explain the Fisher's quantity theory of money. Given, M= Rs.2000, M' = Rs. 1000, V= 4, V'=3 and T = 5000 units of goods. Find price (P) and value of money (1/P) by using Fisher's equation of exchange. (4 +3= 7)

8. (a) Define environmental economics. Discuss the scope of environmental economics. (2+5=7)

(b) What do you mean by market failure? Briefly discuss the various causes of market failure. (2 +6 = 8)