GURU NANAK INSTITUTE OF TECHNOLOGY
An Autonomous Institute under MAKAUT
2021
ECONOMICS FOR ENGINEERS
HU402

TIME ALLOTTED: 3 HOURS **FULL MARKS: 70**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable

GROUP – A
(Multiple Choice Type Questions)

Answer any ***ten*** from the following, choosing the correct alternative of each question: **10×1=10**

			Marks	CO No
1.	(i)	Economic problems arise because a) Resources are limited b) Human wants are unlimited c) Both (a) & (b) d) None of these	1	CO1
	(ii)	The Demand Curve for normal goods a) Rises upwards b) Slopes downwards c) Is parallel to X axis d) Is parallel to Y axis	1	CO1,CO2
	(iii)	Tea & sugar together could be an example of a) Substitute goods b) Complementary goods c) Supplementary goods d) None of these	1	CO1
	(iv)	A change in demand occurs due to a) Increase in Price b) Decrease in Price c) Change in non-price determinants of demand d) None of these	1	CO2
	(v)	When the demand curve is vertical, price elasticity of demand is a) 1 b) Infinity c) Zero d) None of these	1	CO1,CO2
	(vi)	When the demand curve is horizontal, price elasticity of demand is a) Zero b) Infinity c) 1 d) None of these	1	CO3

(vii)	Which of the following measure is adopted to reduce inflation? a) Reduction in bank rate b) b) Reduction in Repo rate c) Increase in government expenditure d) Cuts in government spending	1	CO1,CO2
(viii)	Which of the following is an inferior good? a) Giffen good b) Perishable good c) Luxury good d) Speculative good	1	CO1
(ix)	Inflation is the state in which a) The value of money decreases b) The value of money increases c) The value of the money increases first and then decreases d) The value of money decreases first and increases later	1	CO 2,CO4
(x)	The basic unit of production in an economy is known as a) Industry b) Firm c) Consumer d) Market	1	CO2
(xi)	A large Margin of Safety means a) Over production b) Under production c) Higher fixed cost d) A favourable condition for the business	1	CO1
(xii)	If a firm uses 70% of its capacity, further increase in variable inputs will lead to a) Increase in output b) Decrease in output c) Decrease in output till full capacity is utilized d) Increase in output till full capacity is utilized	1	CO1,CO2

GROUP – B
(Short Answer Type Questions)

Answer any ***three*** from the following: **3×5=15**

		Marks	CO No
2.	The demand function for a good is Q = 24-3P. Find the theoretical maximum quantity demanded and the theoretical maximum price.	5	CO2,CO3
3.	What are inferior goods? State the relations between inferior goods and the income of the consumer.	5	CO1,CO2
4.	The following information is given for XYZ Co: Fixed Cost : Rs 4500 Variable Cost : Rs 7500	5	CO3

Sales : Rs 15,000
Units produced & sold : 5000 units
Calculate : (i) Break-Even Point (in units)
(ii) Sales units required to earn a profit of Rs 6000

5.		Katherine advertises to sell cookies for Rs 4 a dozen. She sells 50 dozen, and decides that she can charge more. She raises the price to Rs 6 a dozen and sells 40 dozen. (i)What is the price elasticity of demand? 3 (ii) Assuming that the elasticity of demand is constant, how many would she sell if the price were Rs 10 a dozen? 2	5	CO1,CO2
6.	(a)	What are the demerits of the Payback Period method?	2	CO3
	(b)	From the following information find the Payback Period of a project which requires an initial investment of Rs 30,000:	3	CO3

Year	**Annual Cashflow (After tax & after depreciation @10%) (Rs)**
1	8,000
2	10,000
3	7,000
4	15,000
5	9,000

GROUP – C
(Long Answer Type Questions)

Answer any ***three*** from the following: **3×15=45**

			Marks	**CO No.**
7.	(a)	From the following information calculate the Profit: Sales = Rs 80,000 Variable Cost = Rs 60,000 Break-even Sales = Rs 60,000	5	CO3,CO4
	(b)	From the following information calculate the Sales required to earn a profit of Rs 1,20,000: Sales : Rs 6,00,000 FC : Rs 1,80,000 VC : Rs 3,75,000	5	CO3,CO4
	(c)	Let the demand curve and supply curves are= D= -50P+250, S=100/3P Find out equilibrium price and quantity demanded.	5	CO2,CO3
8.	(a)	Explain the Cost & Revenue behaviour of a firm at various levels of output with a relevant diagram.	10	CO2,CO3
	(b)	Explain the concepts of change in demand & change in quantity demanded.	5	CO1
9.	(a)	From the following information calculate :	10	CO2

i) Contribution ii) P/V Ratio iii) Break-Even Sales
iv) Margin of Safety :
Sales = Rs 40,000 ; Fixed Cost = Rs 12,000 ;
Variable Cost = Rs 20,000
Also calculate the revised values of these if:
Fixed cost increases by 10%, Variable Cost decreases by 10% and Sales increases by 10% (all together).

	(b)	A project costs Rs 15,00,000 and gives an annual profit of Rs 3,00,000 before tax @ 50% and after depreciation @ 10%. Calculate the Pay back Period.	5	CO1
10.	(a)	From the following information calculate: (i) NPV (ii) IRR (iii) PI	12	CO2,CO3

Yr	**Net Cash Flow(Rs)**
1	5000
2	8000
3	10,000
4	4000

Initial Investment is Rs 20,000.
Given:

Year	D.F@13%
1	0.885
2	0.783
3	0.693
4	0.613

	(b)	What is Cross Elasticity of Demand? Explain.	3	CO1
11.		Write short notes on ***any three*** :	3x5=15	
	(a)	Recession	5	CO2
	(b)	GDP & GNP	5	CO2
	(c)	Business cycle	5	CO2
	(d)	Significance of Margin of Safety	5	CO3
	(e)	IRR	5	CO1