Sample Question Format
(For all courses having end semester Full Mark=50)

KIIT Deemed to be University
Online End Semester Examination(Spring Semester-2021)

Subject Name & Code: **Applicable to Courses:**

Full Marks=50   **Time:2 Hours**
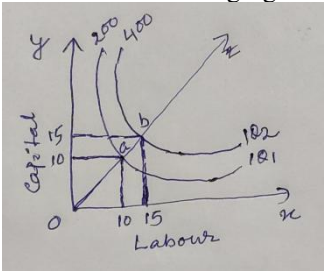
SECTION-A(Answer All Questions. Each question carries 2 Marks)

Time:30 Minutes   **(7×2=14 Marks)**

Question No	Question Type (MCQ/SAT)	Question	CO Mapping	Answer Key (For MCQ Questions only)
Q.No:1		The Market Price of microchips is fixed at Rs.50 by demand and supply equilibrium. If a GST of Rs.10 per unit is imposed by the government then (i) Supply curve will shift to left and price will increase (ii) Supply curve will shift to right and price will decrease (iii) Both supply condition and price will remain unchanged (iv) None of these	CO1	i
		There is a shift of supply curve for sea fish because of bumper production of the same in the rainy season. The demand condition remaining constant, this will cause (i) An increase in quantity and rise in price (ii) An increase in quantity and fall in price (iii) A decrease in quantity and fall in price (iv) None of these	CO1	ii
		Other factors remaining unchanged if the supplier of onion faces a decrease in the price of onion this will result in (i) A movement along the supply curve (ii) A rightward shift of the supply curve (iii) A leftward shift of the supply curve (iv) None of these	CO1	i
		Normal shape of the indifference curve is convex to the origin because (i) Goods are perfect substitutes (ii) Goods are perfect complementaries (iii) Goods are not perfect substitutes (iv) None of these	CO1	iii
Q.No:2		When the consumer moves on the budget line, he spends (i) His entire money income and purchases the combination of two goods (ii) Less than his money income and purchase the combination of two goods (iii) More than his money income and purchases the combination of two goods (iv) None of these	CO1	i

		When price of banana is Rs.50 per kg Sudarshan buys 10 kg and Guru buys 20 kg. If price of banana increases to Rs.60 per kg. Sudarshan buys 5 kg and Guru buys 15 kg then (i) Sudarshan is more elastic and Guru is less elastic (ii) Guru is more elastic and Sudarshan is less elastic (iii) Both Sudarshan and Guru are more elastic (iv) None of these	CO1	iii
		What type of good would you expect to have negative income elasticity of demand (i) Luxury goods (ii) Inferior goods (iii) Both luxury and inferior goods (iv) None of these	CO1	ii
		If the price of a good X increases by 20% and the demand for its related good Y declines by 30% then X and Y are (i) Substitutes (ii) Complementaries (iii) Unrelated (iv) None of these	CO1	ii
Q.No:3		In case of law of variable proportion explaining short run relation between inputs and output the producer should not continue production beyond the point when (i) Marginal Product (MP_L) is maximum (ii) Average Product (AP_L) is maximum (iii) Marginal Product (MP_L) is zero (iv) None of these	CO1, CO2	iii
		Observe the following table and identify the stage-II of production in terms of units of Labour (L)	CO1, CO2	iii

Units of Labour	Average Product	Marginal Product
1	2	2
2	3	4
3	3.8	6
4	4	4
5	3.6	2
6	3	0
7	2	-4

(i) 3 and 4
(ii) 1 and 2
(iii) 5 and 6
(iv) None of these

		Given the production function $$Q = 10L^{1/2} K^{1/2}$$ The return to scale the above production function shows is (i) Increasing return to scale (ii) Decreasing return to scale (iii) Constant return to scale (iv) None of these	CO1, CO2	iii
		Observe the following figure and identify the return to scale	CO1, CO2	i

		(i) Increasing return to scale (ii) Diminishing return to scale (iii) Constant return to scale (iv) None of these			
Q.No:4		Which of the following statements is true about Marginal Cost (MC) (i) MC is not determined by Total Variable Cost (ii) MC is not determined by Total Fixed Cost (iii) MC is determined by Total Fixed Cost (iv) None of these	CO1, CO2	ii
		At a certain level of output the total sales of a company is Rs.100000 and Total Variable Cost is Rs.40000. The profit-volume ratio of the company is (i) 60 percent (ii) 40 percent (iii) 100 percent (iv) None of these	CO1, CO2	i
		Which of the following is true at the break-even point (i) Total contribution is equal to Total Variable Cost (ii) Total contribution is equal to Total Fixed Cost (iii) Total contribution is equal to Average Fixed Cost (iv) None of these	CO1, CO2	ii
		At any level of output beyond the minimum point of Average Cost (AC) curve, the relation between Average Cost (AC) and Marginal Cost (MC) is (i) MC is less than AC (ii) MC is higher than AC (iii) AC is higher than MC (iv) None of these	CO1, CO2	ii
Q.No:5		Which of the following is true about monopoly market (i) Marginal Revenue is equal to the price (ii) Average Revenue is equal to the price (iii) Marginal Revenue is equal to the Average Revenue (iv) None of these	CO1, CO2, CO3	ii
		Which of the following is true under monopoly market (i) Average Revenue (AR) line is the Demand line (ii) Marginal Revenue (MR) line is the Demand line (iii) Price is fixed on the Marginal Revenue (MR) line (iv) None of these	CO1, CO2, CO3	i
		Which of the following is true about perfect competition market (i) There is a single seller and many buyers (ii) There is a single seller and single buyer (iii) There are many sellers and many buyers (iv) None of these	CO1, CO2, CO3	iii
		The short-run supply curve faced by a competitive firm is (i) The rising portion of the Marginal Cost curve (ii) The portion of the Marginal Cost curve above the minimum Average Variable Cost curve (iii) The portion of the Marginal Cost curve above the minimum Average Cost curve (iv) None of these	CO1, CO2, CO3	ii
Q.No:6		Ahuta wants to have Rs.900000 at the end of 9th year and Rs.1000000 at the end of 10th year from now for purchasing a plot in her locality. If money is growing at 9.5%, the amount of money she should deposit in her account now is (i) 1900000 (ii) 901177.4178 (iii) 801177.4178 (iv) None of these	CO1, CO2, CO3	iii
		The compound amount of the following cash flow diagram would	CO1, CO2,	ii

				CO3	
		be 0 1 2 3 4 5 6 10000 10000 10000 10000 i = 7% compounded annually (i) 40000 (ii) 46975.94731 (iii) 46900.94731 (iv) None of these		CO3	
		You are using the credit card of a private bank. The nominal annual rate of interest charged by the bank is 13 percent. If compounding is done monthly the effective rate of interest would be (i) 13 percent (ii) 13.1 percent (iii) 13.80 percent (iv) None of these		CO1, CO2, CO3	iii
		The annual equivalent deposit of an initial deposit of $1400000 for 14 years at 6% interest rate would be (i) 100000 (ii) 150000.8726 (iii) 150618.8726 (iv) None of these		CO1, CO2, CO3	iii
Q.No:7		Which of the following is the correct expression for NDP_{MP} when NNP_{FC} is given (i) $NDP_{MP} = NNP_{FC} + Depreciation + NFIA$ (ii) $NDP_{MP} = NNP_{FC} - NFIA + NIT$ (iii) $NDP_{MP} = NNP_{FC} + NFIA + NIT$ (iv) None of these *NB:* NDP_{MP} = Net Domestic Product at Market Price NNP_{FC} = Net National Product at Factor Cost NFIA = Net Factor Income from Abroad NIT = Net Indirect Tax		CO1, CO2, CO3	ii
		Which of the following is the correct expression for GDP_{MP} when NNP_{FC} is given (i) $GDP_{MP} = NNP_{FC} - Depreciation + NFIA + NIT$ (ii) $GDP_{MP} = NNP_{FC} + Depreciation - NFIA + NIT$ (iii) $GDP_{MP} = NNP_{FC} + Depreciation - NFIA - NIT$ (iv) None of these *NB:* GDP_{MP} = Gross Domestic Product at Market Price NNP_{FC} = Net National Product at Factor Cost NFIA = Net Factor Income from Abroad NIT = Net Indirect Tax		CO1, CO2, CO3	ii
		For controlling inflation in an economy as a fiscal measure government should (i) Reduce the taxation (ii) Increase the taxation (iii) Keep the taxation constant (iv) None of these		CO1, CO2, CO3	ii
		For controlling inflationary situation in an economy as a monetary measure the central bank of the country should (i) Increase the bank rate (ii) Reduce the bank rate (iii) Keep the bank rate unchanged (iv) None of these		CO1, CO2, CO3	i

SECTION-B(Answer Any Three Questions. Each Question carries 12 Marks)

Time: 1 Hour and 30 Minutes   **(3×12=36 Marks)**

Question No	Question	CO Mapping (Each question should be from the same CO(s))
Q.No:8	(a) Cross price elasticity of demand for air travels in UK between Eastern Airways and Easy Jet UK is +2.7. The income elasticity of demand for business class travel is +1.6. (i) How a 10% increase in price by Easy Jet UK will affect the travel in Eastern Airways. (ii) If income drops by 30% during the second wave of COVID-19, how air travel in UK will be troubled. (iii) Further it is estimated that the price elasticity of demand for business class is 0.42 in Eastern Airways which is 0.62 less than the travel in economy class in this airways. How would you explain this? (b) Given the market demand and supply function for a product Q = 1000 - P (Demand) Q = 700 + 2P (Supply) (i) Find the equilibrium price and Quantity of the product. (ii) The supply curve is revised as Q = 400 + 2P because of an increase in the input price, how this will influence the equilibrium price and quantity. (iii) Draw a suitable diagram with the help of demand and supply curves to present the above conclusions.	CO2, CO3
	(a) The demand function for novels has been estimated as Q = 700 - 2P + 0.02Y where Q = demand P = price per unit Y = per capita income (i) Find the price elasticity and income elasticity of demand when P = Rs.25 and Y = Rs.5000 (ii) If the novel seller wants to increase the Total Revenue, what advice you will give him on the basis of the price elasticity value. (iii) If this novel is not an inferior good how the sales of the novel would change when income rises. (b) Given the market demand and supply curve of a product Q = 1300 - P (Demand) Q = 700 + 2P (Supply) (i) Find the equilibrium price and quantity (ii) If a GST of Rs.20 per unit is imposed on the product find its effect on the equilibrium price. Is the buyer less elastic? Why? (iii) Draw a suitable diagram to demonstrate the effect of the GST on the price	

	of the product.	
	(a) Cross price elasticity of demand between two medicines A and B of the same company is +0.8. (i) How medicines A & B are related? If you expect a 12% increase in the demand for medicine A what change in the price of medicine B would be anticipated. (ii) Suppose there is a 20% increase in the price of medicine B and a 30% decrease in the demand for medicine A, find the cross elasticity between them. How are they related now? (iii) Suppose cross elasticity between medicine A and B is +1.3 and there is a 15% increase in demand for medicine A. If medicine B is sold at Rs.200 per unit, what would be the new price of medicine B now? (b) The demand equation for a demand curve is $\quad$ P = 48 - 3Q (i) Find the Price and Quantity when Total Revenue (TR) is maximum. (ii) Find the value of Marginal Revenue (MR) when TR is maximum. (iii) Determine the price elasticity of demand corresponding to the maximum point of TR.	
Q.No:9	(a) A manufacturing firm faces the following short-run production function $\quad$ $Q = 6L^2 - 0.4L^3$ (i) Find the Labour (L) unit beyond which the Marginal Product of Labour (MP_L) starts falling. (ii) What is the Labour (L) unit after which Average Product (AP_L) remains higher than the Marginal Product (MP_L). (iii) Find the Labour (L) unit beyond which the producer will not apply any more labour. (b) Derive the short-run Average Cost Curve(SAC) with the help of Average Variable Cost (AVC) curve and Average Fixed Cost (AFC) curve. Do you find that SAC is minimum at a higher level of output than the AVC? Why?	CO2, CO3, CO4
	(a) A monopolist faces the following demand and cost functions $\quad$ $C = 200Q + 15Q^2$ (Total Cost) $\quad$ P = 1200 - 10Q (Demand) (i) Find the profit maximizing output and price. (ii) Calculate the amount of profit earned by the monopolist. (iii) Show this profit maximizing condition of the monopolist with the help of a suitable diagram. (b) (i) Decide the return to scale from the following input-output relation $\quad\quad$ Q = 0.5 KL (ii) In a certain production system output changes more than proportionately than the change in inputs. Draw a correct diagram with the help of Isoquants to explain it.	
	(a) The total fixed cost of a company is $300000 and produces a product with variable cost of $42 per unit. The selling price per unit is $72. (i) Find the P/V ratio and break even sales using P/V ratio (ii) If the company producing 15000 units find the margin of safety in percentage. (iii) Sketch a suitable figure to display the break even point and margin of safety.	

	(b) (i) In the long run the firm chooses the least cost combination of Labour and Capital to produce a desired output. Illustrate this with a proper diagram. (ii) In a production process a firm is using labour and capital in such quantities that the Marginal Product of Labour (MP_L) is 20 and Marginal Product of Capital (MP_K) is 15. The price of Labour is \$6 and that of the Capital is \$5. Is the firm using optimal combination of inputs? How?	
Q.No:10	(a) Given the cash flows of a company about an investment proposal in the following table	CO4, CO5, CO6

(a) Given the cash flows of a company about an investment proposal in the following table

Time period	0	1	2	3	4	5
Cash Flows (\$)	-500000	200000	100000	200000	100000	200000

(i) Calculate the Net Present Value (NPV) for the proposal at 4% cost of money.
(ii) Is the proposal acceptable on the basis of NPV value?
(iii) How do you interpret the estimated NPV if you are the finance manager of the company?

(b) Consider the following particulars about an alternative
  Initial cost = \$420000
  Equivalent annual benefit = \$116520
  Life (years) = 5
(i) Draw a cash flow diagram for the alternative.
(ii) Find the Internal Rate of Return of the alternative.
(iii) If the MARR(Minimum Attractive Rate of Return) is 14%, should the alternative be accepted? Why?

(a) A machine has the following particulars
Initial Cost = \$800000
Annual O/M cost = \$20000
Cost at the end of 4th year to maintain the efficiency = \$50000
Cost at the end of 6th year to maintain efficiency = \$50000
Salvage value = \$300000
Life (year) = 12
Interest rate = 12% compounded annually
(i) Write a cash flow diagram.
(ii) Do an Annual Worth analysis for the machine.

(b) To maintain the fitness culture, your University has purchased an equipment and installed in the indoor gym. The cost of the equipment is Rs.5000000 and has a useful life of 6 years. The salvage value of the equipment is 10% of the purchase cost using Sinking Fund method and 12% interest rate calculate
(i) the fixed depreciation.
(ii) the net depreciation and book value at the end of each year.

(a) Government of India has decided to create a inter-state canal facility for agriculture development. The initial investment on the project is Rs.500000000. The annual maintenance cost of the project is Rs.10000000 for a life period of 20 years. The annual benefit arising from the project is Rs.50000000 due to better irrigation facilities. An additional annual benefit of Rs.20000000 arises from fish production from the canal.
(i) Do a Benefit-cost analysis for this project at the interest rate of 7%

	compounded annually (Use PW analysis). (ii) Should the government implement the project? (b) Following are the financial details of two alternatives 1 and 2. | Particulars	Alternative 1	Alternative 2
First cost	$300000	$400000
Annual O/M cost	$40000	$25000
Salvage value	$60000	$80000
Life (years)	5	5 | (i) Do a future worth analysis at the interest rate of 8% compounded annually. (ii) Which alternative should be selected and why?	

Q.No:11	(a) (i) Find NDP_{MP} given the following particulars
	    NNP_{FC} = 100 crore
	    NFIA = 20 crore
	    NIT = 10 crore
	    Depreciation = 7 crore
	(ii) Find the GDP_{MP} given the following particulars
	    NNP_{FC} = 200 crore
	    NFIA = 50 crore
	    NIT = 5 crore
	    Depreciation = 10 crore
	NB: NDP_{MP} = Net Domestic Product at Market Price
	GDP_{MP} = Gross Domestic Product at Market Price
	NNP_{FC} = Net National Product at Factor Cost
	NFIA = Net Factor Income from Abroad
	NIT = Net Indirect Tax
	
	(b) Distinguish between demand-pull and cost-push inflation. How do you see the present oil price hike and inflation in India?
		CO4, CO5, CO6

	(a) (i) Find the GNP_{FC} given the following information
	    GDP_{MP} = 500 crore
	    Depreciation = 60 crore
	    NFIA = 100 crore
	    NIT = 50 crore
	(ii) Find the value of National Income when following particulars are given to you.
	    GDP_{MP} = 600 crore
	    Depreciation = 60 crore
	    NFIA = 90 crore
	    NIT = 30 crore
	NB: GDP_{MP} = Gross Domestic Product at Market Price
	GNP_{FC} = Gross National Product at Factor Cost
	NFIA = Net Factor Income from Abroad
	NIT = Net Indirect Tax
	
	(b) As a Monetary policy committee member of the Central Bank suggest and explain the monetary measures to control inflation in the present scenario.	

	(a) (i) Find the value of GNP_{FC} given the following particulars
	    NDP_{MP} = 400 crore
	    Depreciation = 30 crore
	    NFIA = 50 crore
	    NIT = 60 crore	

(ii) Find the value of NDP_{MP} when following information are available.

GDP_{MP} = 800 crore

Depreciation = 100 crore

NFIA = 100 crore

NIT = 50 crore

NB: NDP_{MP} = Net Domestic Product at Market Price

GNP_{FC} = Gross National Product at Factor Cost

GDP_{MP} = Gross Domestic Product at Market Price

NFIA = Net Factor Income from Abroad

NIT = Net Indirect Tax

(b) As an adviser to the Ministry of Finance suggest and explain important fiscal measures to control the price rising situation in the economy.