UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, January 2021

Course: **Microeconomics Analysis-I**   Semester: **I**
Program: **MA Economics**   Time: **03 Hours.**
Course Code: **ECON7014**   Max. Marks: **100**

SECTION A
Each question carries 5 marks. Instruction: Answer should be short and precise.

S. No.	Question	CO
Q1	What is income consumption curve (ICC)? What will be the slope of ICC if both the goods are normal?	**CO1**
Q2	Define the marginal rate of substitution (MRS) in the context of indifference curve (IC). What will be the MRS if the IC is a straight line and downward sloping.	**CO1**
Q3	Let X_1 and X_2 are perfect substitutes of each other. Price per unit of X_1 and X_2 are P_1 and P_2, respectively. M is the available income of the consumer and $P_1 > P_2$. State the demand function for the utility maximizing consumer.	**CO2**
Q4	What are the distinguishing features of perfectly competitive market?	**CO1**
Q5	State the relationship between average cost (AC) curve and marginal cost (MC) curve.	**CO1**
Q6	What are the causes of existence of monopoly?	**CO1**

SECTION B
Each question carries 10 marks.

Q 7	Explain consumer equilibrium through indifference curve. Using graphs explain the impact of increase in income (prices remaining the same) on equilibrium of the consumer.	**CO2**
Q 8	What is price discrimination? When price discrimination is possible? Differentiate between different types of price discrimination.	**CO3**
Q 9	Explain the monopolist's equilibrium using graphs.	**CO3**
Q 10	What is Slutsky's equation? Using graphs show that price effect is the sum of income effect and substitution effect.	**CO3**
Q 11	Let the production function be $Q = K^{0.4}L^{0.5}$, where Q denotes output, K is capital and L is labour. Price per unit of K (P_K) is 3 and price per unit of L (P_L) is 4 and the total cost of production is 108. Find the value of K and L that maximize the level production (Q).	**CO4**

Section C
Each question carries 20 Marks. Answer any one question.

| Q12 | A monopolist sells in two markets. The inverse demand function in market 1 is $P_1 = 200 - Q_1$ while the inverse demand function in market 2 is $P_2 = 200 - Q_2$. The firm's total cost function is $C = Q^2$, where $Q = Q_1 + Q_2$ and Q is quantity sold/ produced.

The firm is able to price discriminate between the two markets.
(b) What quantities will the monopolist sell in the two markets?
(a) What price will it charge in each market?

<div align="center">**OR**</div>
A monopolist has a cost function given by $C(Q) = Q^2$ and faces an inverse demand function given by $P(Q) = 120 - Q$.

   (a) What is the monopolist's profit-maximizing output level?
   (b) What price will the monopolist charge? | CO4 |