Mahindra University Hyderabad
Ecole Centrale School of Engineering

End-Term SET-1

Program: B. Tech. **Branch: All** **Year: 2nd year** **Semester: 3rd**

Subject: Principles of Economics (HS-2102)

Date: 18-12-2024 **Start Time: 10 am**
Time Duration: 150 minutes **Max. Marks: 50**

Instructions:
1) Please check out for sub-questions under some questions.
2) Regular calculator is allowed inside the exam hall.
3) Use pen/pencil and ruler for diagrams.

Part- A

Answer *All* of the following questions *(4*5=20 Marks)*

1. Classify the type of goods listed below based on their rivalry and excludability characteristics.

   a). National defense b). Public education

   c). Fish in the reservoir d). Gym e). Mobile

2. What is an externality? Classify the type of externalities for the following scenarios:

   a). An industry discharges polluted water into a river.

   b). Neighbors play loud music at high volumes.

   c). Research and development (R&D) activities conducted by scholars.

3.A Identify the type of utility represented in the following scenarios (a and b).

   a). Aditya tried biryani at both Paradise and Pista House restaurants. He derived greater utility from the biryani at Pista House restaurant.

   b). Atharv consumed three apples. He got 10, 8 and 6 *utils* from the first, second and third apple, respectively.

3.B Mention whether the listed features of the utility are True/False for each scenario (c, d & e).

   c). Utility improves welfare. d). Utility is objective. e). Utility has no physical shape.

4. Define price discrimination in the context of a monopoly with two examples and explain the concept of perfect price discrimination.

Part- B

Answer **ANY THREE** of the following questions   **(3*10=30 Marks)**

5. Briefly discuss the features of the Monopoly market. Discuss in detail the profit determination of a monopoly firm (graphically).

6. Compare the determination of 'profit and loss' in the short run under Perfect competition and Monopolistic competition, illustrating the differences graphically.

7. Furnish the below details based on the short run principle "Law of Variable Proportion". Draw the graph representing TP, AP, and MP curves.

No. of Workers	Total Product (TP)	Average Product (AP)	Marginal Product (MP)	Stages
1	8			
2	20			
3	36			
4	48			
5	55			
6	60			
7	60			
8	56			

8. Fill in the details for the following table.

Price	Q	TR	AR	MR	TC	TFC	AFC	AC	MC	Profit
20	1			-	9	2				
18	2				8					
16	3				7					
14	4				6					
12	5				5					
10	6				4					
08	7				3					

Note: Q=output, TR=total revenue, AR=average revenue, MR=marginal revenue, TC=total cost, TFC=total fixed cost, AFC=average fixed cost, AC=average cost, MC=marginal cost.

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