Unity University
College of Business and Economics
Assignment for Introduction to Economics (25%)
Group Assignment (group of 5)

1. **Define the Following**

A. Economics
B. Factors of Production
C. Scarcity
D .Opportunity Cost
E. Law of Demand.
F. Production Possibilities Curve
G. Law of Supply
H. Three basic questions all economic systems must answer

2. **Let the following table represents the total utility of a given consumer, in the cardinal utility approach**.

Q	1	2	3	4	5	6	7
TU_X	8	14	18	20	20	18	16
TU_Y	6	10	13	15	16	16	14
MU_X							
MU_Y							
MU_X/P_X							
MU_Y/P_Y							

   A) Calculate the MU_X and MU_Y and fill the table in the 4^{th} and 5^{th} rows.
   B) If the two products (X&Y) are free goods how many of X and Y should the consumer take to maximize utility?
   C) What is the maximum utility of X and Y if they are free?
   D) Let now price of X is 4 birr per unit and price of Y is 2 birr per unit. Calculate MU_X/P_X and MU_Y/P_Y and fill the 6^{th} and 7^{th} row.
   E) Assuming the consumer has any amount of money (enough budget) how many of X and Y should the consumer buy, to maximize utility?
   F) What is the total utility of X and Y?
   G) Let now price of X is 4 birr per unit and price of Y is 2 birr per unit and budget of the consumer for consumption of X and Y is 20 birr. Given budget constraint how many of X and Y should the consumer buy to maximize utility?
   H) What are the total utility of X and Y

3. **In ordinal Utility** approach, let a consumer's utility function is given by $TU = X^2Y^3$. If price of X is 2 birr and price of Y is 3 birr and if budget of the consumer is 100 birr for consumption of X and Y, then what are the utility maximization X and Y?

4. Let the following table shows the short run production function where labor is variable and other resources are fixed.

L	0	1	2	3	4	5	6	7	8
TP_L									
MP_L	4	6	8	6	4	2	0	-2	-4
AP_L									

   A) Fill the table
   B) Identify the three stages of production

5. Suppose the short run total cost function is $TC = Q^3 - 8Q^2 + 240Q + 200$, then at Q=10
   A) What are the TFC, TVC and TC?
   B) What are the AFC, AVC, and AC?
   C) What is the MC?