



### THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

**Q.1. Answer the following short questions: (15x2=30)**

1. What is marginal analysis?
2. If income of consumer increases, what is the effect on equilibrium price and quantity of a good?
3. If the price elasticity of good X is -0.5, what type of good is it and why?
4. What is the numerical range of income elasticity of demand for luxury goods?
5. If the price of good x increase, what would happen to the slope of the budget line?

Answer question 6-8 using the following information: If we run a simple linear regression,

$$y = \alpha + \beta X + \mu$$

6. What is  $\alpha$  and  $\beta$  in this equation and how do we interpret them?
7. What is  $\mu$  in this equation and what is its significant in linear regression model?
8. If we add another independent variable Y in this equation,

$$y = \alpha + \beta X + \theta Y + \mu$$

Then what kind of regression model is it now and how is the interpretation of  $\beta$  different?

9. What is difference between average and marginal product?
10. What is the profit maximizing equilibrium condition under perfect competition?
11. What is third degree price discrimination?
12. Explain duality theorem.
13. What is a dominant strategy?
14. If the value of interest rate increases, what would happen to the net present value?
15. How is monopsony different from monopoly?

**Q.2. Answer the following questions.**

i. Graphically explain the effect of in the iso-cost line of a simultaneous decrease in the wages and increase in the rental rate of capital. Draw a clear labelled graph and explain each step of how and why it changes as you are showing. (10 Marks)

ii. A manufacturing firm has a total cost function  $TC = 400 + q^2 + q$  where  $q$  is the quantity of output produced by the firm. The market demand for this product is given by the equation  $P = 900 - 2Q$  where  $Q$  is the market quantity and the market supply curve is given by the equation  $P = 100 + 2Q$ .

- a) What is the equilibrium quantity and price in this market given this information? [2 Marks]
- b) What is the firm's profit maximizing level of production, total revenue, total cost and profit at this market equilibrium? Is this a short-run or long-run equilibrium? Explain your answer. [5 Marks]
- c) Given your answer in part (b), what do you anticipate will happen in this market in the long-run? [3Marks]

iii.

- a) What is an example of price wars of an oligopolistic market structure? Who benefits in such price wars? [5 Marks]
- b) Suppose that the Sara cannot produce the banana milkshake till she has a shaker machine and a person to use that machine. Illustrate the isoquant for these two good, shaker machine and labor. Explain what kind of goods are the milk-shaker to labor and why does it take the form you have drawn. [5 Marks]