

For Students of HS 101 – S 3 division only

Indian Institute of Technology Bombay  
Department of Humanities & Social Sciences

HS 101 Economics S - 3

Academic Year: 2017-18

Autumn Semester

Date: 13<sup>th</sup> Sept. 2017

Max. Marks: 30

Mid-Semester Examination

Time: 17.30-19.30 Hrs.

1. Answer ANY FOUR of the following:

[4 × 1.5 = 6 Marks]

- ✓ (i) Explain the concept of Producers' surplus using a diagram
- ✓ (ii) Define Sunk cost and state where does it play an important role in a firm's decision making
- ✓ (iii) Distinguish between Economies of Scale and Economies of Scope giving examples
- (iv) Why does the presence of externalities create market failure?
- ✓ (v) What is "Law of equi-marginal utility"? Explain using an example.
- (vi) Describe the relationship between Total product, average product and marginal product of a variable input using a production function.

2. Answer ANY TWO of the following questions:

[2 × 4 = 8 Marks]

- (i) Assume that a person consumes two goods, X and Y. Use a graph to demonstrate how the consumer adjusts his/her optimal consumption bundle when the price of X decreases. Carefully label all curves and axes. What will happen to consumption if X is a normal good? What will happen to consumption if X is an inferior good?
- ✓ (ii) How does elasticity affect the burden of a tax? Justify your answer using supply and demand diagrams. Will your answer vary depending on whether the tax is imposed on buyers or sellers? Explain briefly.
- ✓ (iii) Derive and distinguish the *long run* equilibrium of a firm operating in a perfectly competitive market and monopolistic competition.
- ✓ (iv) Why does the profit maximization equilibrium of a monopoly normally lead to loss in social welfare? How does the government intervention help correct it?

3. Identify which of the following statement is True or False:

[12 × 0.5 = 6 Marks]

- (i) The assumption of homogeneous product is necessary for firms to be price takers.
- (ii) As a firm moves along its long-run average cost curve, it is adjusting the size of its factory to the quantity of production.
- (iii) A firm's marginal cost does not depend on the level of fixed costs.
- (iv) If countries specialize according to *comparative advantage*, a more efficient use of given resources occur. As a result, the world output of at least one good increases, without decreasing the world output of any other good.
- (v) If at any given quantity, the marginal revenue of a price-taking firm is larger than the marginal cost, the firm will increase its production.
- ✓ (vi) A tax imposed on a supplier will more likely to be passed on to the consumer in form of a price increase if the demand is elastic.

- (vii) Unless markets are perfectly competitive, the total surplus to buyers and sellers cannot be maximized.
- (viii) Binding price ceilings benefit consumers because they allow all consumers to buy all the goods they demand at a lower price.
- (ix) The marginal rate of substitution along an indifference curve does not change for perfect substitutes.
- (x) As a general rule, profit-maximising producers in a competitive market produce output at a point where marginal cost is increasing.
- (xi) If the price elasticity of supply is zero, then the quantity supplied is the same, regardless of price.
- (xii) Free trade benefits a country both when it exports and when it imports.

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**4. Fill in the blanks with a suitable word in the following statements. [10 × 0.5 = 5 Marks]**

- (i) When the marginal product of labour is negative, as an extra unit of labour is employed, then the total product will \_\_\_\_\_
- (ii) A curve showing all the input combinations that yield the same level of output is called \_\_\_\_\_
- (iii) When suppliers jointly work to restrict output in order to control the price, the firms are said to be engaged in a \_\_\_\_\_
- (iv) A market with only two sellers is called \_\_\_\_\_
- (v) A parallel shift in budget line occurs when \_\_\_\_\_ changes
- (vi) In a market with free entry and exit, economic profits are driven to \_\_\_\_\_ in the long run.
- (vii) Price effect is decomposed into income and \_\_\_\_\_ effect.
- (viii) The study of how the allocation of resources affects economic well-being is called \_\_\_\_\_ economics.
- (ix) The long run average cost curve is an \_\_\_\_\_ of the short-run average cost curves.
- (x) Costs and \_\_\_\_\_ curves are mirror images of each other.

**5. Multiple Choice Questions. Mark the Best Choice.**

**[10 × 0.5 = 5 Marks]**

- (i) Price elasticity along a negatively sloped straight line demand curve will be
  - A. Zero
  - B. Constant
  - C. Infinity
  - D. None of the above





- (ii) Economic profit
- A. will never exceed accounting profit
  - B. is most often equal to accounting profit
  - C. is always at least as large as accounting profit
  - D. is a less complete measure of profitability than accounting profit
- (iii) If a resource constrained Government wishes to increase expenditure on education by reducing the expenditure on defence, it is an example of
- A. diminishing marginal utility
  - B. trade off
  - C. externality
  - D. none of the above
- (iv) Suppose a competitive firm produces and sells 18 units of output and has marginal revenue of Rs. 9. What would be the firm's total revenue if it instead produced and sold 14 units of output?
- A. Rs. 162.00
  - B. Rs. 136.00
  - C. Rs. 126.00
  - D. Rs. 96.00
- (v) Unit elastic supply curve is depicted by a line
- A. parallel to X-axis
  - B. parallel to Y-axis
  - C. passing through the origin
  - D. none of the above
- (vi) According to the diminishing marginal productivity, total product
- A. decreases at an increasing rate
  - B. decreases at a decreasing rate
  - C. increases at a decreasing rate
  - D. increases at an increasing rate
- (vii) Efficiency means that
- A. society is conserving resources in order to save them for the future.
  - B. society's goods and services are distributed equally among society's members. ✖
  - C. society's goods and services are distributed fairly, though not necessarily equally, among society's members. ✖
  - D. society is getting the maximum benefits from its scarce resources.
- (viii) College-age athletes who drop out of college to play professional sports
- A. are not rational decision makers
  - B. are well aware that their opportunity cost of attending college is very high
  - C. are concerned more about present circumstances than their future
  - D. underestimate the value of a college education

(ix) Which of the following statements best characterizes a basic difference between market economies and centrally-planned economies?

- A. Society relies more upon prices to allocate resources when the economy is centrally-planned than when it is market-based ✕
- B. The self-interest of households is reflected more fully in the outcome of a centrally-planned economy than in the outcome of a market economy ✕
- C. Government plays a larger role in the economic affairs of a market economy than in the economic affairs of a centrally-planned economy ✕
- D. None of the above are correct

(x) A rationale for government involvement in a market economy is as follows:

- A. Markets sometimes fail to produce a fair distribution of economic well-being
- B. Markets sometimes fail to produce an efficient allocation of resources
- C. Property rights have to be enforced
- D. All of the above are correct