

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. SECOND SEMESTER EXAMINATION, MAY 2017

FIRST YEAR [BATCH 2016-19]

ECONOMICS (Honours)

Paper : II

Date : 18/05/2017

Time : 11 am – 3 pm

Full Marks : 100

[Use a separate Answer Book for each group]

Group – A

1. Answer **any three** questions :

[3×4]

- “Different elasticities do not make price discrimination feasible” —Justify your agreement or disagreement.
- Why does excess capacity arise in monopolistic competition? Explain its economic significance.
- “A competitive firm cannot maximize its profit if the last worker hired, adds to its output more than the average productivity of already existing workers.” Prove or disprove the statement.
- How does the price elasticity of supply affect changes in the short-run equilibrium price that results from an exogenous shift in the market demand curve?
- “A monopolist will never provide an efficient level of output.” Do you agree? Explain.
- Why can a monopolist's marginal revenue be negative for some levels of output? Why is marginal revenue negative when market demand is price inelastic?

2. Answer **any one** question :

[1×8]

- There are only two firms in an industry producing identical products. The demand condition is represented by $p = 100 - 0.5(q_1 + q_2)$ where q_1 and q_2 stand for output levels of the two firms. Let $C_1 = 5q_1$ and $C_2 = 0.5q_2^2$ represent their cost functions. Derive the Cournot reaction functions of the two firms and their equilibrium outputs. Find also the price and profit earned by the firms.
- A monopolist faces a linear demand curve $p = a - bq$, $a, b > 0$, for its product, and it has constant marginal cost ‘c’. A quantity tax at the rate ‘t’ is imposed on the output.
 - How do the marginal cost, price and output change? [1+2+2]
 - How is the Lerner Index of market power changed? [3]

3. Answer **any two** questions :

[2×15]

- Explain the role of conjectural variation in the determination of oligopoly output. [10]
 - “In a Prisoner's dilemma game, the outcome is Pareto-dominated”. True or False. [5]
- A profit maximising monopolist has the following demand and total cost functions; demand function : $p = \frac{3}{q}$ and cost function : $C = 2q + 3q^2$. Is it possible for this monopolist to produce positive amounts for which his profit would be maximum? Give reasons for your answer. [5]
 - Given the demand function $p = 20 - q$ and the total cost function $c = q^2 + 8q + 2$, answer the following questions.
What output maximises total profit and the corresponding values of price, profit and sales? [10]

- c) i) A competitive profit maximizing firm operates at a point when its short-run average cost curve is upward sloping. What does this imply about the firm's economic profits? [3]
- ii) There are 1000 identical firms in a competitive industry each operating with a short run cost function— $C = \frac{1}{300}q^3 - 0.2q^2 + 4q + 10$. Determine the short run industry supply function. If the market demand function is $Q^D = -2000P + 80,000$, determine the equilibrium price-quantity combination. [5+2]
- iii) A price taking firm's supply curve is $S(P) = 10P$. What is the producer surplus for the firm if the market price is Rs. 20? By how much does producer surplus change when the market price increases from Rs. 20 to Rs. 21? [5]
- d) i) A monopolist faces a demand curve $P = 210 - 4Q$ and initially faces a constant marginal cost $MC = 10$.
- A) Calculate the profit maximizing monopoly quantity and compute the monopolist's total revenue at the optimal price.
- B) Suppose that the monopolist's marginal cost increases to $MC = 20$. Verify that the monopolist's total revenue goes down.
- C) Suppose that all firms in a perfectly competitive equilibrium have a constant marginal cost $MC = 10$. Find the long-run perfectly competitive industry price and quantity.
- D) Suppose that all firms' marginal cost increases to $MC = 20$. Verify that the increase in the marginal cost causes total industry revenue to go up. [10]
- ii) A profit maximizing monopolist faces a liner demand curve that cuts the price axis at 120 and quantity axis at 60. The cost function is $C = q^2$. Suppose that a price ceiling at the level 80 is imposed on the monopolist. Determine the amount by which her profit falls. [5]

Group – B

4. Answer **any three** questions : [3×4]
- a) For a closed economy in the long run, discuss the impact of an increase in the amount of taxation.
- b) Show that the Phillips curve can be viewed as an alternative representation of the Aggregate Supply curve.
- c) Explain the relationship between money supply and nominal rate of interest using the Fisher equation.
- d) Explain, in brief, the concept of Hysteresis using the Insider-Outsider model.
- e) Distinguish between inside and outside lags in the context of policy implementation.
- f) Discuss the costs associated with expected inflation.
5. Answer **any one** question : [1×8]
- a) Consider an economy described by the production function $Y = K^{0.3}L^{0.7}$. Assuming no population growth and a depreciation rate of 10%, find out the golden rule rate of savings.
- b) Show how the current and future money supply affect the price level in an economy.
6. Answer **any two** questions : [2×15]
- a) Discuss, in brief the Quantity Theory of Money. What is its implication on the role of monetary policy? If this is true then why does government try to increase its holding of real revenue by printing money? Does this process contain any loophole? [5+2+4+4]

- b) Explain the concept of Philips Curve. Show the role of (i) Inflation inertia; (ii) Demand pull inflation and (iii) Cost push inflation on Phillips Curve. Why does the shape of Phillips Curve differ between Short Run and Long Run? [3+(3+3+3)+3]
- c) Show how the Real Business Cycle Theory explains the relationship between the labour-leisure choice of individuals and real fluctuations in an economy. How does it defend the idea of technological regress? [8+7]
- d) i) Construct a suitable model to show how transactionary demand for money can be sensitive to the interest rate.
- ii) What are the alternative objectives of the monetary policy of a Central Bank? [9+6]

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