

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

B.A./B.Sc. SECOND SEMESTER EXAMINATION, MAY 2015

FIRST YEAR

ECONOMICS (Honours)

Paper : II

Date : 21/05/2015

Time : 11 am – 3 pm

Full Marks : 100

[Use a separate Answer book for each group]

Group – A

1. Answer **any three** questions of the following : (3 × 4)

- Show that the supply curve for a competitive firm is the rising part of the MC curve.
- “If the demand curve facing a monopolist is linear and marginal cost is constant, a per unit tax on her raises the price of the product by half the tax”. – Do you agree? Explain.
- Why does excess capacity arise in monopolistic competition? What is its economic significance?
- Suppose that a monopolist is sufficiently well-informed to be able to extract the whole of each customer’s consumer surplus. What output would be produced? Will there be any deadweight loss?
- Describe the oligopoly market structure and give some examples.
- Why there is no unique model of oligopoly?

2. Answer **any one** question of the following : (1 × 8)

- A firm in the competitive market has the long run cost function –
 $C = 2q^3 - 40q^2 + 1200q$
 - If the firm can sell its output at a price of $P=1046$, how much will it produce to maximize profit?
 - Is the output of the firm compatible with industry equilibrium?
 - If the industry is one of constant cost industry, derive the equation for long run industry supply curve.
 - If the market demand curve is $P=8500 - 5Q$, how many firms will there be in long run equilibrium?
- Take the following price game, which shows the payoffs for airlines A and B in profits (millions).

		airlines B	
		Raise price	Lower price
airlines A	Raise price	10, 10	3, 12
	Lower price	12, 3	6, 6

Find the Nash equilibrium, if any. Can you identify the cartel instability problem here?

3. Answer **any two** questions of the following : (2 × 15)

- A competitive firm finds that at equilibrium level of output
 - Its $AR=20$, $MC=20$ and $AC=60$ while $AVC=16$
Will the firm produce or shut down? Explain with the help of a diagram. If price falls, up to what level can it bear the decline in the price? Can you be absolutely sure of your answer? Give reasons. (10)
 - With the help of sketches show that the loss or the abnormal profit accruing to a competitive firm in the short-run is driven to zero by the free exit and free entry of the firms. (5)

- b) A) A monopoly faces a linear demand curve
 $P=100-0.01Q$ (12)
 The firm's total cost function is $C=30,000+50Q$
- Determine Profit maximising price and output.
 - Magnitude of profit earned
 - Monopoly power
 - Rise in price in response to the levy of a unit tax of 10 and loss of social welfare caused by it.
- B) Now suppose the firm was a competitive one before acquiring the monopoly power. Calculate the deadweight loss caused by this transition. (3)
- c) A) A multiplant monopoly facing the market demand curve $Q=105-P$
 Operates through two plants with production costs (8)
 $C_1=5Q_1$ And
 $C_2=0.5Q_2^2$
- Determine profit maximising output of the monopoly and also the amount of profit accruing to it.
 - Allocation of output among plants and individual profits accruing to them.
- B) What is natural monopoly? Explain its pricing policies that lead to (7)
- Maximization of social welfare
 - Recovery of production costs
- d) Consider two identical firms facing a market demand function $P = 30 - Q$, where $Q = q_1 + q_2$, q_1 and q_2 being the outputs produced by two firms. Each firm has zero marginal cost.
- If the two firms decide their outputs simultaneously how much will they choose to produce? Show the solution graphically using reaction curves. (4)
 - What will be the output levels when one firm gets to move first? Why is moving first an advantage? (4)
 - Show that collusion can lead to higher profits for both firms. (3)
 - If collusion is profitable, why don't Cournot firms produce output at the joint profit maximizing levels? Is there any "prisoners' dilemma" involved here? (4)

Group – B

4. Answer **any three** questions of the following : (3 × 4)
- Explain the role of interest rate in setting the full employment equilibrium in the long run.
 - Explain the impact of an increase in population growth rate on Solow's model.
 - Show that the Phillips curve is an alternative representation of the Aggregate supply curve.
 - Differentiate between the transaction and portfolio theories of money demand.
 - Explain briefly how the Central Bank creates High Powered money?
 - Distinguish between Adaptive and Rational Expectations.
5. Answer **any one** question of the following : (1 × 8)
- Explain how coordination Failure can lead to recessions. (8)
 - Describe the Quantity Theory of Money. How does the cost of holding money alters the formulation. (4 + 4)
6. Answer **any two** questions of the following : (2 × 15)
- Explain, with the help of Solow's model how an economy reaches its steady state. How does the introduction of technological progress alters the findings of the model? (7 + 8)

- b) Explain the concept of sacrifice ratio. Discuss how the Rational Expectation theory justifies the absence of the sacrifice ratio. (5 + 10)
- c) Do you think that transactionary demand for money can be a function of rate of interest? Explain. (3 + 12)
- Consider a situation where banks are opening many ATM counters which reduces the cost of banking transactions, How this affects the money demand?
- d) i) Define Seigniorage. What are its limitations? (3 + 2)
- ii) What is Fisher Effect? (4)
- iii) What are the costs of inflation? (6)

