

# RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. SECOND SEMESTER EXAMINATION, MAY 2018

FIRST YEAR [BATCH 2017-20]

ECONOMICS (Honours)

Paper : II

Date : 19/05/2018

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]
    - a) An increase in the demand for video films also increases the salaries of actors and actresses. Is the long-run supply curve for films likely to be horizontal or upward sloping? Explain.
    - b) In long run equilibrium, all firms in the industry earn zero economic profit. True or false, explain.
    - c) Discuss the determinants of an imperfectly competitive firm's degree of monopoly power.
    - d) How does a car salesperson practice price discrimination? How does the ability to discriminate correctly affect his or her earnings?
    - e) Will a perfectly discriminating monopolist ever produce at the inelastic portion of the demand curve it faces? Explain.
    - f) What happens to the equilibrium price and quantity in a monopolistically competitive market if one firm introduces a new, improved product?
  2. Answer **any one** question : [1×8]
    - a) i) When does a situation of natural monopoly arise? What are the alternative pricing options under natural monopoly? [4]  
ii) Can you think of a situation where a monopolist's optimal output is zero? [4]
    - b) Explain the Stackelberg model of oligopoly in detail. [8]
- Answer **any two** questions from **Question Nos. 3 to 6** : [2×15]
3. The demand function in a duopoly market is  $Q = 20 - P$ , where  $Q$  is the total output sold by the two firms 1 and 2. The cost function of the  $i^{\text{th}}$  firm is  $TC = 8q_i$ ,  $i = 1, 2$ .
    - a) If the firms collude to act as a monopoly, what will be the equilibrium industry output and profit? [5]
    - b) What will be the price and outputs in a Cournot-Nash equilibrium? What will be the profits? [5]
    - c) If firm 1 acts as a Stackelberg leader what will be the price, outputs and profits? [5]
  4. a) The linear demand curve faced by a monopolist cuts the price axis at 160 and quantity axis at 80. Her cost function is  $C = 3Q^2$ . Find the deadweight loss and Lerner Index of monopoly power. [3+3]  
b) A monopolist has the demand and cost functions  $q = 360 - 20p$ ,  $c = 6q + 0.05q^2$ .
    - i) Determine the profit –maximizing price and output. [2]
    - ii) The government wishes to impose a maximum price at a level that will induce the monopolist to produce the maximum possible output. What is the price? How much output is produced? How is the consumer surplus affected? [2+2+3]
  5. Discuss the long run supply curve in a perfectly competitive market with respect to constant cost, increasing cost and decreasing cost industry. [5+5+5]

6. Suppose the market for widgets can be described by the following equations :  
 Demand :  $P = 10 - Q$ , Supply :  $P = Q - 4$ , where  $P$  is the price in dollars per unit and  $Q$  is the quantity in thousands of units. Then :
- What is the equilibrium price and quantity? [3]
  - Suppose the government imposes a tax of \$1 per unit to reduce widget consumption and raise government revenues. What will the new equilibrium quantity be? What price will the buyer pay? What amount per unit will the seller receive? [6]
  - Suppose the government has a change of heart about the importance of widgets to the happiness of the American public. The tax is removed and a subsidy of \$1 per unit is granted to widget producers. What will the equilibrium quantity be? What price will the buyer pay? What amount per unit (including the subsidy) will the seller receive? What will be the total cost to the government? [6]

### **Group – B**

7. Answer **any three** questions : [3×4]
- In an economy in the long run, what will the impact of an increase in government expenditure be when the savings function is positively related to the rate of interest?
  - According to the Solovian growth model, the lower the level of per capita income, the higher will be the growth rate of income in the pre-steady state situation. Explain the transitional dynamics with the help of a diagram.
  - Why is inflation like a tax? [2]
    - “Printing money is a good option for meeting Government debt/expenditure”. Do you agree? [2]
  - What is ‘Sacrifice Ratio’? What is the role of price expectations in determining the Sacrifice Ratio? [2+2]
  - ‘The debate over rules versus discretion is distinct from the debate over passive versus active policy.’ Do you agree? Explain in brief.
  - How does the definition of money supply become important in the context of the portfolio theory of money demand?

Answer **any one** question from **Question Nos. 8 & 9** : [1×8]

- In Solow growth model, how does the rate of population growth affect the steady-state level of income? [3]
  - Suppose the production function is  $y = \sqrt{k}$ .
    - Solve for the steady-state value of  $y$  as a function of  $s$ ,  $n$ ,  $g$  and  $\delta$ . [2]
    - A developed country has a saving rate of 28% and a population growth rate of 1% per year. A less developed country has a saving rate of 10% and a population growth rate of 4% per year. In both countries  $g = 0.02$  and  $\delta = 0.04$ . Find the steady state value of  $y$  for each country. [2]
  - What policies may a less-developed country pursue to raise its level of income? [1]
- Distinguish between adaptive and rational expectations. Discuss why only unanticipated policy changes can influence the equilibrium income level under rational expectations. [3+5]

Answer **any two** questions from **Question Nos. 10 & 13** : [2×15]

- How can you show that the transaction demand for money may be a function of the rate of interest? [7]
  - How does this interest sensitivity of money demand affect the effectiveness of monetary policy? [4]
  - How will the money demand be affected if the distribution of income changes? [4]

11. a) Explain, with the help of Phillips curve, the impacts of :  
i) An anticipated increase in money supply by the Central Bank. [3]  
ii) An increase in government spending not followed by an equivalent increase in taxes. [3]  
iii) Strong labour union movement leading to an increase in wages. [3]  
b) How can you derive the short run Phillips curve relation from the relationship between output and price level? Explain the economic significance of each of the terms in the Phillips curve relation. [3+3]
12. Describe, with the help of the Real Business Cycle Model, why the fall in employment in an economic downturn can be regarded as completely voluntary. How did the Real Business Cycle theorists explain the concept of random productivity decline? Explain. [9+6]
13. a) Describe the process of money multiplier. With the help of this expression, describe the impact of the following factors on monetary base, money multiplier and money supply :  
i) An increase in reserve-deposit ratio.  
ii) A decrease in currency-deposit ratio.  
iii) An open market sale of securities by the Central Bank.  
b) Show why the Central Bank cannot pursue monetary targeting and interest rate targeting at the same time. [5+6+4]

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