RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

B.A./B.SC. THIRD SEMESTER EXAMINATION, DECEMBER 2013

SECOND YEAR

Date : 14/12/2013 **Economics (Honours)**

Time : 11am – 3pm Paper : III Full Marks : 100

(Use separate answer book for each group)

Group – A

1. Answer **any three** questions of the following : (3 × 4)
   a) Explain the derivation of offer curve for an individual in an Edgeworth box economy.
   b) State and prove Brouwer's Fixed Point theorem.
   c) Suppose there are 'n' identical firms in a competitive market each having a common cost function : $c(y) = y^2 + 1$. The market demand curve is linear given by $x(p) = a - bp$, where p = price of the commodity. Obtain the equilibrium price in this perfectly competitive industry.
   d) Let L be the gamble which gives prizes Rs. 10 and Rs. -10 with equal probabilities and L^* be the gamble which gives prizes Rs. 20 and Rs. -20 with equal probabilities, respectively. Show that any risk - averse person will prefer L to L^*.
   e) Briefly state the adverse selection and moral hazard problems in case of medical insurance.
2. Answer **any one** question of the following : (1 × 8)
   a) Does attainment of an efficient allocation necessarily imply that Walrasian equilibrium is attained? Explain.
   b) Consider the following market model :

   $Q_t^d = Q_t^s; Q_t^d = 20 - 3P_t; Q_t^s = 0 (t = 0)$

   $Q_t^s = -10 + 3P_t^*; t = 1, 2, ...$ Where P_t^* is the expected price at t - th period. Given that :-

   $P_t^* = P_{t-1}^* + \alpha(P_{t-1} - P_{t-1}^*); \quad \alpha \in [0,1], \; t = 2, 3, ...$

   $P_t^* = P_0; \; t = 1$

   Find the time path of price.
3. Answer **any two** questions of the following : (2 × 15)
   a) i) Analyze the impact of the Wedge created by the excise tax; on both the consumers and producers. Who bears the greater burden of the tax? (5)
   ii) There are 10 firms in a competitive market. Each firm has a cost function $c(q) = 16 + q^2$. The market demand function is Q = 24-p. Determine the equilibrium price and quantity per firm. (5)
   iii) Explain the concept of Tannonement Process. (5)
   b) i) Consider an economy where the consumers, A and B have Leontief Preferences. The consumers consumes two goods x & y with the following utility functions : $U^A(x, y) = \min\{x, 2y\}$ and $U^B(x, y) = \min\{2x, y\}$. The endowments of A : (1, 0) and B : (0, 1). Calculate the optimal choice of 'x' & 'y' for both the consumers. Calculate the optimal price vector where trade is conducted. Is the equilibrium a Stable Equilibrium? (9)
   ii) How would you determine the optimum level of insurance for a risk averse person in a competitive insurance market? (6)
   c) i) 'The long-run industry supply cannot be negatively sloped if every firm in the industry has a rising Marginal Cost Curve'. Argue true or false. (8)
   ii) 'The demand functions of inputs and the supply functions of a perfectly competitive firm in the short run are homogeneous of degree zero'. Explain. (7)

d) i) Define risk premium and show that for a risk averse person the value of risk premium is positive. (5)

ii) Define Arrow - Pratt measure of risk aversion. What will be the value of Arrow - Pratt measure of risk aversion for the utility function $U = A - Be^{-cy}$, $c > 0$, $B > 0$. (5)

iii) Discuss with proper reasons the impacts of a Minimum Wage Legislation in a perfectly competitive labour market. (5)

Group – B

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

a) What is Solow residual?

b) Explain 'Fisher effect'.

c) What is Lucas critique?

d) Distinguish between conditional and unconditional convergence.

e) Explain 'Open Market Operation' as an instrument of monetary policy.

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

a) Show, with the help of a model, how current price level is influenced by current and expected money supply of the Central Bank. Suppose, a Central Bank has two options - either to increase money supply now or to increase money supply after 10 years. What, according to your model, will be the difference of the policies with regard to their possible impact on current price level? (5 + 3)

b) Explain, with the help of the Phillips Curve, how expectation about inflation influences current inflation. What will be the shape of the Phillips Curve if –

i) People assume the price level of the previous period to prevail in current period?

ii) People can anticipate current price level perfectly? $(3 + 2\frac{1}{2} + 2\frac{1}{2})$

6. Answer **any two** questions of the following : (1 × 15)

a) i) Examine the validity of the statement :

"The higher the steady-state capital-labour ratio is, the more consumption each worker can enjoy in the long run." (8)

ii) How does the introduction of population growth and technological progress alter the conclusions of the Solow model? (7)

b) i) Distinguish between 'Fiat Money' and 'Commodity Money'. (4)

ii) Explain the concept of seigniorage. What are its limitations? (4)

iii) Explain the concept of 'Cost of Holding Money'. How does introduction of this cost changes the Quantity Equation? (7)

c) Distinguish between 'Adaptive Expectations' and 'Rational Expectations'. Show, with the help of a model, how under Rational Expectations anticipated changes in monetary policy influences equilibrium price and income level of the economy. (4 + 11)

d) i) Distinguish between Portfolis and Transaction theories of money demand. (4)

ii) Show, with the help of Baumol Tobin model of money demand, how income and interest rate affects the demand for money. Is the impact of change in income the same as that of the 'Quantity theory of Money'? (8 + 3)