RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

FIRST YEAR

B.A./B.SC. SECOND SEMESTER (January – June) 2014

Mid-Semester Examination, March 2014

Date : 24/03/2014 **ECONOMICS (Honours)**

Time : 11 am – 1 pm Paper : II Full Marks : 50

[Use a separate Answer Book for each group]

Group – A

(*Answer **any two** of the following*)

1. Consider the production function $Y = K^{\alpha}L^{\beta}$ where K & L are the levels of employment of Capital (K) and Labour (L). Set up a cost constraint and frame the optimisation problem of the producer, who wants to maximize the level of output Y. Using the Lagrange multiplier process, set up the necessary conditions of output maximisation. Interpret them. [6]

2. Consider the production function : $Y = \min\{x_1 + 2x_2, 2x_1 + x_2\}$
   a) Construct the Isoquant curve for the production function, with proper explanations.
   b) Does the equilibrium occur at the corners or is it an interior solution? [6]

3. A producer has the production function : $Y = \max\{K, L\}$. Assume that the producer is an output maximiser. The producer hires its inputs from a competitive market, where labour is remunerated at the rate 'w' per hour, and capital is remunerated at 'r'. Find the producer's equilibrium level of output. [6]

Group – B

(*Answer **any one** of the following*)

4. a) Construct a **set** of indifference curves satisfying all the standard assumptions, except each of the following. For each case, give appropriate examples of goods.
      i) Arati likes good 2, but she does not care for good 1.
      ii) Benu likes good 1, but dislikes good 2.
      iii) Chetana may reach a point at which she is satiated with good 1 but not with good 2.
      iv) Dwijen has a 'bliss point', at which he is satiated with both goods.
   b) If Mr. A's MRS of salad for pizza equals to -5, then which of the following is true? Explain your answer.
      i) He would give up 5 pizzas to get the next salad.
      ii) He would give up 5 salads to get the next pizza.
      iii) He will eat 5 times as much pizza as salad.
      iv) He will eat 5 times as much salad as pizza. [(4×2½)+3]

5. a) Using usual assumptions on preferences show that indifference (level) curves are downward sloping.
   b) How would you derive the utility function from usual preference structure? Is it unique? Explain. [5+(5+3)]

Group – C

6. During the given year the following activities occur :
   a) A silver mining company pays its workers ₹2,00,000 to mine 75 pounds of silver. The silver is then sold to a jewellery manufacture for ₹3,00,000.

b) The jewellery manufacture pays its workers ₹2,50,000 to make silver necklaces which it sells directly to consumers for ₹10,00,000.

i) Using the production for final goods approach what is the GDP of the economy? [3]

ii) What is the value added at each stage of production? Using the value added approach what is the GDP? [3]

iii) What are the total wages and profits earned? Using the income approach, what is the GDP? [3]

7. Suppose the economy is characterized by the following behavioural equations :

$C = 160 + 0{\cdot}6\ Y_D$

$I = 150$

$G = 150$

$T = 100$

a) Solve for the equilibrium output. [2]

b) Assume that G is now equal to 110. Solve for the equilibrium output. [2]

c) Assume G = 110. Compute public plus private saving. Is the sum of private plus public saving equal to investment? Explain. [2]

8. Using a standard IS-LM model explain the concept of 'Crowding out' phenomenon. What is the extent of crowding out if—

a) investment is unresponsive to changes in rate of interest?

b) money supply is unresponsive to changes in rate of interest? [6+(2+2)]