RAMAKRISHNA MISSION VIDYAMANDIRA

(A Residential Autonomous College under University of Calcutta)

FIRST YEAR

First-Semester Examination, December 2010

Date : 15-12-2010 **ECONOMICS (Honours)** Full Marks : 100

Time : 11am – 3pm

(Use separate answer script for each group)

Group - A

1. Answer **any three** questions : [4×3 = 12]

   a) From January of 2008 through January of 2009, the price of gold nearly doubled. Yet as the price of gold rose, sales of gold increased as well. Does this imply that the demand curve for gold is upward sloping? Why or why not?

   b) A consumer is willing to trade one kg of sugar for three kgs of atta. He is currently purchasing as much sugar as atta per month. The price of sugar is twice that of atta. Should he reduce his consumption of atta and increase sugar consumption or should he reduce his consumption of sugar and increase atta consumption?

   c) An individual spends all his income on two commodities X and Y. If an increase in the price of X leads to an increase in the amount consumed of Y, what can you infer about the price elasticity of commodity X? Justify your answer.

   d) What is the relation between marginal cost and average variable cost when marginal product and average product are equal. (Assume only one variable factor).

   e) How are short run marginal cost curves and long run marginal cost curve related to each other?

2. Answer **any one** question : [8×1 = 8]

   a) What is meant by stability of equilibrium? Does Walrasian stability necessarily imply Marshallian stability? Explain your answer. [2+6 = 8]

   b) Can a production function, which exhibits constant returns to scale, be subject to diminishing returns to input? Give reasons for your answer. [8]

3. Answer **any two** questions : [15×2 = 30]

   a) i) A consumer consumes two commodities X and Y but prefers any bundle with more X regardless of the Y in the bundle. At the same time, if two bundles contain equal amount of X then he prefers the one with more Y. Draw an indifference map to present these preferences. Which axiom of choice has been violated in this case? [5]

   ii) Sketch the budget line for income of Rs. 600/- if price of X is Rs. 2 for the first 200 units and Rs. 1/- for all units purchase in excess of 200 while price of Y is Rs. 3/-.Is it possible to have more than one equilibrium? Show it graphically. [5]

   iii) Draw and explain the shape of the consumer's budget line if the consumer has already spent one-third of his budget on X and another one-third on Y and allocates the remaining amount to both X and Y. [5]

   b) i) Show that substitution effect of price change is always negative using the axioms of revealed preference theory. [5]

ii) A consumer purchases $q_1 = 20$ and $q_2 = 10$ at prices $p_1 = 2$ and $p_2 = 6$. Later on, it is observed that he purchases those two goods $q_1 = 18$ and $q_2 = 4$ at prices $p_1 = 3$ and $p_2 = 5$. Is his behaviour consistent with the axiom of revealed preference theory? [5]

iii) Can you distinguish between Hicks approach and Slutsky approach relating to the decomposition of price effect into income effect and substation effect if the two goods under consideration are perfectly complements? Explain your answer. [5]

c) Of the two firms A uses a production process in which the inputs are perfectly substitutable. B uses two inputs which are perfect complements.

i) Draw the isoquant maps for A and B. Each map should consist of atleast two isoquants. [6]

ii) Can you obtain the marginal rates of technical substitution between the two inputs which are used in two different production units? Is any further information required for such findings? [5]

iii) Can you obtain ridge lines for the production functions of A and B? [4]

d) i) Why does the short run average variable cost curve reach its minimum point earlier than the corresponding average total cost curve? [5]

ii) Suppose an economy takes a downturn; labour costs fall by 50 per cent and are expected to stay at that level for a long time. How does this change in relative prices of labour and capital affect the firm's expansion path? [5]

iii) Write down the form of the constant Elasticity of Substitution (CES) production function. Examine its characteristics. [5]

Group - B

4. Answer **any three** questions : [4×3 = 12]

a) How does the concept of 'Green GDP' differ from the concept of traditional GDP?

b) What will happen to the stability condition of equilibrium in Simple Keynesian model if investment expenditure considered in this model becomes a function of income?

c) Define IS curve. Under what circumstances the curve becomes—

i) Horizontal

ii) Vertical

d) What is the equation of the aggregate supply curve? What will be the shape of the curve if people expects inflation—

i) to remain at the level that prevailed in the previous year?

ii) accurately, i.e., actual inflation equates expected inflation.

e) What were Keynes' conjectures about the consumption function?

5. Answer **any one** question : [8×1 = 8]

a) What is the immediate direct effect on national product of the following transactions : [2×4 = 8]

i) Mr X buys a new car for \$ 1,000

ii) Mr X buys a new car for \$ 1,000 which he partly finances by selling his old car for \$ 300.

iii) Mr X buys a cheaper new car for only \$ 500 and with the remaining \$ 500 he buys shares.

iv) Mr X instead of buying shares gives the money to his wife. She spends \$ 300 on a new fur coat and remaining \$ 200 on a piece of antique furniture.

b) How the flow of new housing is determined by the interaction of the concerned supply and demand? In what way can the stock market be an indicator of economic activity? [5+3 = 8]

6. Answer **<u>any two</u>** questions : [15×2 = 30]

a) Derive the expression for Balanced budget multiplier in the Simple Keynesian model and interpret. How does this multiplier change in the context of IS-LM model? Can you get the Simple Keynesian model result even in he context of IS-LM model? Explain. [4+7+4 = 15]

b) Jack and Jill both obey the two-period Fisher model of consumption. Jack earns Rs. 100 in the first period and Rs. 100 in the second period. Jill earns nothing in he first period and Rs. 210 in the second period. Both of them can borrow or lend at the interest rate r.

i) Both Jack and Jill consume Rs. 100 in period 1 and Rs. 100 in period 2. What is the interest rate? [2]

ii) If the interest rate rises what will happen to Jack's consumption in period 1? Is Jack better-off or worse-off now? [4]

How can you explain the short-run variability of observed consumption-income ratio by cross-section data analysis in the framework of Permanent Income hypotheis? [9]

c) i) Explain the sticky price model to explain why aggregate supply curve is positively sloped in the short run. What will happen to the shape of the curve if the number of firms with flexible prices increase in the economy. [6+2 = 8]

ii) Using the AD-AS framework explain the effectiveness of fiscal and monetary policies when—

I) People form their price expectations based on the price of previous period

II) People can anticipate the actual price level perfectly. [3½×2]

d) i) The Central Bank of an economy is considering two alternative monetary policies :

- Adjusting the money supply to hold interest rate constant
- Holding the money supply constant

In the IS-LM model which policy will better stabilize output if—

1. All shocks to the economy arise from exogenous changes in the demand for goods and services
2. All shocks to the economy arise from exogenous changes in the demand for money. [6]

ii) Analyze the impact of the increased facility of introduction of ATM card on the level of output and rate of interest. [4]

iii) 'A combination of tight monetary policy and expansionary fiscal policy leads to a high rate of interest, but the effect on output is uncertain.' Judge the validity of this statement. [5]