

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

B.A./B.SC. FIRST SEMESTER EXAMINATION, DECEMBER 2011

FIRST YEAR

ECONOMICS (Honours)

Date : 16/12/2011

Time : 11am – 3pm

Paper : I

Full Marks : 100

[Use separate answer-books for each group]

Group–A

1. Answer **any three** questions: 4x3
 - a) Demand for Cadbury Chocolates is more elastic than demand for chocolates in general, explain clearly, why? 4
 - b) A consumer demands less of a commodity when its price falls. Does this imply reduced demand for the same commodity of the same consumer when his income rises? Explain. 4
 - c) What is price control? Give examples. Show that if price is set below equilibrium price then output will fall and a shortage will result. 4
 - d) Prove that the elasticity of factor substitution is unity for Cobb-Douglas function. Is the assumption of constant returns necessary for the proof? 4
 - e) What is the relation between marginal cost and average variable cost when marginal product and average variable product are equal? (Assume only one factor). 4
2. Answer **any one** question: 8x1
 - a) What are the differences between cardinal and ordinal utility theories? When prices are $(p_1, p_2) = (2, 1)$, a consumer demands $(x_1, x_2) = (1, 2)$ and when prices are $(q_1, q_2) = (1, 2)$ the consumer demands $(y_1, y_2) = (2, 1)$. Is this behaviour consistent with the model of maximising behaviour? Which bundle is preferred by the consumer? 8
 - b) For the production function $Q = \min\left(\frac{L}{a}, \frac{K}{b}\right)$, derive the total, average and marginal product curves. 8
3. Answer **any two** questions: 15x2
 - a) How do we derive the demand curve and the Engel curve? What does the Engel curve for an inferior good look like? Why both goods in a two commodity world cannot be inferior? 10+3+2
 - b) i) Start with a given equal endowment of good x and good y for individuals A and B. Draw A's and B's indifference curves on the same set of axes showing A's preference bias for good x and B's for good y respectively. Explain the shapes. 2½+2½
ii) An individual has the following utility function between tea (T) and coffee (C): $u(C, T) = 3C + 4T$. Initially the consumer consumes both. How would a tax on coffee alter the individual's choice. Illustrate graphically. 5
iii) Establish negative substitution effect using the axioms of Revealed Preference theorem. 5
 - c) i) A consumer consumes two good x and y. He prefers any bundle with more x, irrespective of the quantity of y. Consideration of y comes in whenever x is same in two bundles. Draw an indifference map which illustrates this proposition. 5
ii) Prove that ridge lines are necessarily iso-clines. 5

- iii) Derive LAC and explain its shape. 5
- d) What is the result of a firm's constrained output maximisation or constrained cost minimisation when 'Q' is the total output produced and 'K' and 'L' are the two inputs used in the production process?
- Given a production function $F(K, L) = KL^2$ and the price of capital is Rs. 10 and that of labour is Rs. 15, what combination of labour and capital minimises the cost of producing any given output? 12+3

Group-B

4. Answer **any three** questions: 4x3
- a) i) If the value of flour used in the production of bread is added together with the value of bread in deriving the value of GNP, there is a problem of double counting. Why does a similar problem not arise when the value of oven purchased by a bakery is added together with the value of bread? 2
- ii) Why is the imputed rental income of owner-occupied housing included in GDP and not the market value of the house itself? 2
- b) In the sticky price model how will the Aggregate Supply curve behave if the fraction of firms with sticky price increase? 4
- c) Distinguish between the nature of Consumer's optimum when borrowing constraint is binding and borrowing constraint is non-binding in the framework of Fisher's model of Intertemporal choice. 4
- d) Explain the role played by the (united) inventory in attainment of equilibrium in the Keynesian cross model. 4
- e) How are investment decisions related to Tobin's q ? 4
5. a) What are the implications of the life cycle Hypothesis of consumer behaviour for the effectiveness of fiscal policy and monetary policy actions? 8
- b) Consider the following consumption, investment and money demand functions — 5+3
- $$C = 4000 - 400r + \cdot 20Y$$
- $$I = 2400 - 4000r$$
- $$\frac{M^d}{P} = 3000 + \cdot 12Y - 10000r$$
- i) Assuming $G = 2000$, $\frac{M}{P} = 3000$ find the values of equilibrium Y and r .
- ii) If G changes to 3000, find the changed values of Y and r . 5+3
6. Answer **any two** questions: 15x2
- a) i) Describe how one can find the value of personal disposable income from GNP.
- ii) Suppose a country has an $MPC = 2$. What will be the effect of a decrease in government spending in that country?
- iii) Using the two sector circular flow diagram show how GNP is both-total income of all earning members in the economy and total expenditures on the economy's output of all final goods and services. 4+4+7
- b) What is the basis of post-Keynesian consumption theories?

Explain how Friedman's Permanent Income theory analyzes the empirical findings regarding observed consumption–income behaviour in short run.

3+12

- c) i) Suppose at a particular point of time government of a country wants to increase the level of aggregate demand of the economy. The government can use a combination of fiscal and monetary policy mix to do so. Describe graphically the ideal policy mix if maintaining interest rate stability is one of the major targets of the government. Also show mathematically that under this situation there is no crowding out.
- ii) Suppose increase in the price of crude oil has created an adverse economic shock to an economy resulting into an increase in unemployment and price level. Show that, under this situation government's attempt to increase employment through expansionary policy may lead to further increase of the price level. (5+3)+7
- d) i) Assuming consumption as a positive function of income along with autonomous investment and government expenditures show (both diagrammatically and mathematically) how an increase in autonomous expenditure leads to more than proportional increase in equilibrium national income.
- ii) How will the impact change if investment now becomes a function of income? Explain the condition for stability in this context.
- iii) Explain, in brief, the concept of paradox of thrift. 7+4+4
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