

**Bangabasi College**  
**Test Examination, 2015**  
**B.Sc (Hons.) (1+1+1 System), Part II**  
**ECONOMICS (Honours)**

Full marks: 50 + 50

Time: 4 Hrs.

**Section A**

1. Answer any *five* questions (5 × 4):

- (a) Data obtained of a firm is as follows:  $MP_L = 10$ ,  $MP_K = 15$ ,  $P_L = \text{Rs } 20$ ,  $P_K = \text{Rs } 15$ . Explain why these data prove that the firm is run inefficiently. How would you improve efficiency if you are put in charge of the firm?
- (b) Answer whether the following statements are true or false or uncertain stating reasons:
  - (i) The positive difference between price and marginal cost indicates the degree of power enjoyed by the monopolist.
  - (ii) If  $MR=MC$ , firms will necessarily make profit under perfect competition. (2+2)
- (c) Explain the differences in the characteristics of a monopolistically competitive firm and perfectly competitive firm?
- (d) A loss making perfectly competitive firm in the short run would shut down operation. Do you agree?
- (e) Under a constant cost industry, explain the nature of long run supply curve in a perfectly competitive market structure.
- (f) Draw the indifference maps indicating the direction of preferences in the following cases:
  - (i) Ravi does not like apple juice or pineapple juice alone but likes to have a mocktail of them.
  - (ii) Rahul likes more money to less. He also likes to watch good movies but only up to 3 movies a day, after which she gets sick. (2+2)
- (g) State whether the following statement is true or false or uncertain with reasons: Ram has utility function  $U(x,y) = x + 2y$ . If the price of  $x$  is 1 and the price of  $y$  is  $\frac{1}{2}$ , then Ram must consume equal amounts each good in order to maximize this utility.
- (h) Suppose for an individual  $Y_1 = 100$ ,  $Y_2 = 200$  and  $r = 0.1$ . Derive the consumption function of the individual as suggested by PIH(Permanent Income Hypothesis).
- (i) Describe the steady state level of capital. Is the steady state stable?
- (j) An economy has the per capita production function  $y = k^{1/2}$ . Find the balanced growth value of  $k$ , given that the saving rate is 16%, depreciation rate is 10%, and population growth rate of 2%.
- (k) Describe the accelerator model of inventories show a relation of inventory investment to economic fluctuations. Explain.
- (l) Suppose an investor wants to set up a factory. How does he decide whether it is worthwhile or not? Explain your answer with the help of marginal efficiency of capital and investment.
- (m) (i) What anomalies were identified with respect to the Keynesian consumption function? (ii) What is the consumption puzzle? (2+2)
- (n) (i) What is Solow Residual? (ii) Why is Solow residual often used as a measure of technological progress? (2+2)

2. Answer any *five* questions (5 × 6):

- (a) Consider the cost function  $C(x) = 15x - 6x^2 + x^3$ . Is it a short-run or long-run cost function? Find out the average cost and marginal cost. Find out the value of  $x$  for which AC is minimum and show that  $MC = AC$  at this stage.
- (b) Explain the pattern of utility functions when the consumer is (i) risk-averter, (ii) risk-neutral and (iii) risk-lover. Suppose that an individual's utility function is  $U(w) = w^2$ . Is the person a risk lover? Will he accept a gamble where there is a chance of winning Rs 20 and of losing Rs 20 with equal probability, if his initial wealth is Rs 100?

- (c) (i) Rahul faces a two commodity world of X and Y. His income is Rs 1000 and  $P_X$  and  $P_Y$  are Rs 25 and Rs 40 respectively. The bundle that gives greatest satisfaction contains 10 units of Y. What will be the optimum bundle of X for Rahul? Graph the budget set and the optimum bundles. (ii) If the price of X decreases to Rs 20, Rahul's new optimum bundle contains 11 units of Y. How much X does Rahul's new optimum bundle contain? Graph the new budget set and the optimum bundles.
- (d) Consider the cost function  $C(q) = q^3 - 60q^2 + 1500q + 150$ ; Find out the variable cost, fixed cost, average variable cost, average fixed cost, average cost, and marginal cost. Explain the reason behind the U-shape of Short-run Average Cost curve.
- (e) Many government programs deliver benefits in kind to people. For example, food stamps can only be used to buy food. Economists often argue that cash transfers are better. The typical food stamp recipient has Rs 200 per week in income in addition to Rs 80 per week in food stamps. (i) Draw the budget constraint. (Hint: the two axis should be 'all other goods' and 'food'). (ii) One proposal is to substitute Rs 80 in cash for the stamps, that is, one can use the amount to buy any goods including food. Draw the budget constraint that results from this proposal. (iii) Which would the recipient prefer and why?
- (f) Suppose that some change in government policy reduces the natural rate of unemployment. Describe how this change affects output both immediately and over time. Is the steady-state effect on output larger or smaller than the immediate effect? Explain.
- (g) Suppose that the demand for investment is given by the model  $I = s(K^* - K_t)$  where  $K^*$  is the desired stock of capital given by  $K^* = 0.1 \frac{Y}{R}$  where Y is output and R is the interest rate. Assume that there is no depreciation and  $R = 0.05$ . Let  $s = 0.25$  to start. (i) Calculate the desired stock of capital in year 1 if output is 200. (ii) Calculate the level of investment in the first year if the capital stock was 400 at the beginning of the first year. (iii) Suppose now that output sizes from 200 to 250 in year 2 and remains at this new level forever. Calculate the level of investment and the capital stock in years 2, 3 and 4. What are the new long-run levels of investment and capital? Explain why investment reacts with a lag to the increase in output. (2+2+2)
- (h) An important implication of the permanent-income hypothesis is that fiscal policy operates with a lag. (i) Explain why a permanent increase in government spending may cause the IS curve to shift out slowly over time rather than all at once. (ii) If permanent income is a weighted average of last period's and this period's income, what determines the speed at which the IS curve shifts out over time? (3+3)
- (i) Explain the following puzzle: Saving depends positively on the interest rate, investment depends negatively on the interest rate, and saving equals investment. How does an increase in money supply that lowers the interest rate and thereby increases investment also increase saving? It would seem that, with the lower interest rate, saving would be lower, what is going on? (3+3)
- (j) What role do consumption and investment functions play in the Keynesian theory of income determination?
- (k) Suppose government has taken an expansionary fiscal policy to enhance the growth rate of the economy. At the same time RBI adopted contractionary monetary policy to combat inflation. What will be the impact of these policy mix on the level of income and interest rate?
- (l) Find (i) IS and LM functions (ii) Slope of the functions, (iii) Equilibrium national income and interest rate from the following information:  $L_d = 0.5 Y$ ;  $L_s = 50 - 20r$ ;  $C = 150 + 0.8Y$ ;

$I = 40 - 2r$ ,  $M_s = 100$  (where  $L_a$  : Transaction demand for money;  $L_s$ : Speculative demand for money; C: Consumption expenditure; I: Investment expenditure;  $M_s$ : Money supply).

- (m) Distinguish between visible and invisible trade in BOP account.  
(n) 'Monetary policy is ineffective under fixed exchange rate regime'—Explain the statement.

### Section B

3. Answer any *five* questions ( $5 \times 4$ ):
- (a) Distinguish between the notions of economic growth & economic development.
  - (b) Mention the variables that are taken into consideration for measuring HDI.
  - (c) Indicate the pattern of change in the occupational structure while a country ascends from less developed to developed status.
  - (d) State any one criticism against the Rostow's stage theory.
  - (e) How can land-labour ratio affect agricultural productivity?
  - (f) Distinguish between ACOR and ICOR.
  - (g) Mention any two features of green revolution.
  - (h) State the reasons behind the deceleration of Indian industries in mid-sixties?
  - (i) State two main reasons behind disinvestment in Indian industries.
  - (j) Mention any two schemes implemented by the Government for generating rural employment in India.
  - (k) Define the new strategy introduced in the Fourth Five Year plan.
  - (l) State one cause of the crisis of Indian economy during the 7<sup>th</sup> five year plan.
4. Answer any *three* questions ( $3 \times 10$ ):
- (a) Explain the capabilities approach towards economic development.
  - (b) Explain the notion of poverty trap as explain by Nurkse. Explain the relevance of "big push theory" of Rosenstein Rodan in overcoming this trap.
  - (c) Explain the Fisher-Clark views regarding the economic transition of a country.
  - (d) Explain the relationship between industrial growth, GDP growth and productivity growth in an economy with the help of Kaldor's Growth Laws.
  - (e) Analyse Arrow's concept of 'learning by doing' Explain the role of investment in education towards the expansion of human capital.
  - (f) What is the meaning of choice of technique problem? Discuss the situations where a labour-surplus economy may choose capital-intensive technology instead of labour-intensive technology.
  - (g) Critically analyse the process of industrialization and rural-urban migration in a labour-surplus economy on the basis of Lewis' model.
  - (h) Describe the features of Indian economy on the eve of independence with a reference to the colonial rule.
  - (i) "Indian plans are good in paper but are not so good in implementation"—logically explain the statement.
  - (j) What were the structural constraints to the implementation of developmental planning in India?
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