Entrance Examination, June 2011

M.Phil and Ph.D. (Economics)

Time: 2 Hours

Maximum Marks: 75

HALL TICKET NUMBER

M.Phil./Ph.D. Entrance Examination

Department of Economics

Max. Marks: 75   Duration: 2 Hours

Part-A (Answer all 25 Questions)

1. A single good economy is one in which
    A. there is no labour.
    B. there is one consumption good.
    C. there is one capital good.
    D. there is one good which serves both consumption and investment.

2. Which of the following distinguishes Neo-classical economics from Classical economics?
    A. Methodological Individualism
    B. The Maximization assumption
    C. The concept of Homo economicus
    D. All of the above

3. According to Ricardian theory of rent, rent arises due to
    A. ownership Rights of the Landlords.
    B. scarcity of labour.
    C. niggardliness of nature.
    D. contribution of landlords to production.

4. A country growing at 5% per annum will double its income in
    A. 10 years
    B. 14 years
    C. 15 years
    D. 20 years

5. In a neo-classical model of growth, if a constant rate of profit is associated with a falling output- capital ratio, it is indicative of
    A. labour –saving technical progress.
    B. capital- saving technical progress.
    C. Harrod-neutral technical progress.
    D. labour augmenting technical progress.

6. In Monetary theory, which of the following thinkers would come close to agreement?
    A. Keynes and Marx
    B. Keynes and Milton Friedman
    C. Keynes and Lucas
    D. Keynes and Prescott

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7. For Keynes, in General Theory, employment is determined by:
   A. the intersection of labour demand and labour supply.
   B. the Quantity theory of money.
   C. natural rate of unemployment.
   D. product market equilibrium.

8. Suppose you are president and your advisors give you an econometric estimate of the output-inflation trade-off. To your surprise, when you try using this estimate to make policy, you find the actual tradeoff is larger. This situation is an example of
   A. time inconsistency.
   B. discretionary policy.
   C. a political business cycle.
   D. the Lucas critique.

9. In New Classical Models, which of the following is true?
   A. Money is not neutral, so real output is affected by money.
   B. Money is neutral, therefore it does not affect real output.
   C. Money is neutral but it affects the real output due to price-surprise effects.
   D. Money is not neutral, so it affects real output due to price-surprise effects.

10. With almost negligible growth in total factor productivity, India's post-reform economic growth is sustained by:
   A. robust growth of exports.
   B. robust growth of foreign exchange reserves.
   C. massive surge in domestic capital formation.
   D. massive public expenditure.

11. Structural inflation in India is related to:
   A. faster monetary expansion.
   B. poor agricultural performance.
   C. fiscal deficit.
   D. balance of payments problems.

12. Buffer stocks are maintained by FCI to stabilize:
   A. food subsidies.
   B. public distribution.
   C. food grain prices.
   D. all of them.

13. Land reforms are considered important in increasing agricultural production because:
   A. it is fundamentally egalitarian and eradicates poverty.
   B. it removes intermediaries and provides market access to farmers.
   C. it transfers the control of productive assets into the hands of actual producer.
   D. it enables government to introduce supportive programs.

14. A model of late-comer economic development is provided by:
    A. Albert Hirschman.
    B. Arthur Lewis.
    C. Nurkse.
    D. Alexander Gerschenkron.

15. When RBI carries out a sterilized foreign exchange intervention, its transactions
    A. leave the domestic money supply unchanged.
    B. increase the domestic money supply.
    C. decrease the domestic money supply.
    D. None of the above.

16. Amartya Sen's work showed that famines occurred more often due to:
    A. crop failures.
    B. desertification.
    C. loss of entitlements.
    D. natural calamities.

17. The following type of labour migration is the largest in India:
    A. intra-rural migration.
    B. intra-urban migration.
    C. rural-urban migration.
    D. urban-rural migration.

18. Under perfectly flexible exchange rates, changes in the balance of trade
    A. do not affect the domestic money supply.
    B. affect the domestic money supply.
    C. affect the rate of interest alone.
    D. affect both the domestic money supply and rate of interest.

19. In the presence of heteroscadasticity, the OLS estimators are:
    A. unbiased.
    B. efficient.
    C. non-linear.
    D. highly significant.

20. A sufficient statistic implies that
    A. it contains all relevant information available in a sample.
    B. it contains all relevant information needed to solve the research problem.
    C. it contains same amount of information irrespective of the sample chosen.
    D. it contains all information of the population.

21. Which of the following is true for a market allocation (i.e. for a competitive general equilibrium)?
    A. It is Pareto optimal in the presence of a externality in consumption and absence of externality in production.

B. It is Pareto optimal in presence of positive externality in production
C. It is Pareto optimal in presence of positive externality in consumption & production
D. It is Pareto optimal in absence of an externality in consumption and production.

22. Irrespective of what the original distribution may be, as the sample size increases, the mean value of the relevant variable behaves like a
   A. binomial distribution.
   B. Gaussian distribution.
   C. uniform distribution.
   D. Bernoulli distribution.

23. Consumption function for an economy is given by: $C = 137 + 0.6\ Y^d$, where C is consumption and Y^d is disposable income given as: $Y^d = 0.9\ Y$. Then expenditure multiplier is:
   A. 2.5.
   B. between 2.6 and 3.0.
   C. below 2.4.
   D. above 3.0.

24. Which of the following actions is an example of expansionary fiscal policy?
   A. A decrease in welfare payments.
   B. A purchase of government securities in the open market.
   C. A decrease in the Bank rate.
   D. A decrease in the corporate profits tax rates.

25. The natural rate of unemployment is generally thought of as the
   A. ratio of the frictional unemployment rate to the cyclical unemployment rate.
   B. sum of structural unemployment and cyclical unemployment.
   C. sum of frictional unemployment and cyclical unemployment.
   D. sum of frictional unemployment and structural unemployment

Part-B (Answer all 50 Questions)

26. Crowding-out occurs
   A. when expansionary fiscal policy causes interest rates to rise, thereby reducing private spending, particularly investment.
   B. when contractionary fiscal policy causes interest rates to decline, thereby increasing private spending, particularly investment.
   C. when tight monetary policy causes interest rates to rise, thereby reducing private spending, particularly investment.
   D. all of the above.

27. Demand pull inflation may be caused by:
   A. An increase in costs.
   B. A reduction in interest rate.
   C. A reduction in government spending.
   D. An outward shift in aggregate supply.

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28. The Mundell -Tobin effect claims that moderate inflation would lead to
    A. a fall in the rate of interest and a rise in the rate of investment.
    B. a fall in production.
    C. a fall in money holding.
    D. all the above.

29. The effects of inflation on the price competitiveness of a country's products may be offset by:
    A. An appreciation of the currency.
    B. A revaluation of the currency.
    C. A depreciation of the currency.
    D. Lower inflation.

30. India's current exchange rate policy can best be described as
    A. a fixed exchange rate.
    B. a perfectly flexible exchange rate.
    C. a managed float.
    D. a pegged exchange rate.

31. Which of the following statements is TRUE?
    A. The hypothesis that poor countries tend to row faster than rich ones and hence will catch up is referred to as "Conditional Convergence".
    B. The key property of endogenous growth models is the absence of diminishing returns to capital.
    C. In the Solow model, the larger is the savings rate, larger will be the equilibrium rate of growth of per capita income.
    D. In the Harrod-Domar Model, if warranted rate of growth is less than the expected rate of growth, than the actual rate of growth will be less than the expected rate of growth.

32. Which of the following is NOT a component of the Human Development Index?
    A. Life expectancy.
    B. GNP per Capita.
    C. Infant Mortality Rate.
    D. Literacy Rate.

33. What conclusion can be reached from the following data on income shares?
    % of income received by

	Lowest 40%	Highest 20%
Bangladesh	22.9	37.9
Indonesia	21.0	40.7

    A. Absolute poverty is more widespread in Bangladesh.
    B. The size distribution of Income is more unequal in Indonesia.
    C. Bangladesh has adopted a strategy of re-distribution with growth.
    D. Bangladesh is growing faster than Indonesia.

34. The theory of under consumption is primarily associated with the name of
    A. Karl Marx.
    B. Paul Sweezy.
    C. V.I. Lenin.
    D. Rosa Luxemburg.

35. Which of the following is NOT a characteristic of Rural Credit Markets in India?
    A. Tendency towards segmentation.
    B. The lack of Interlinked credit markets.
    C. Interest rate variation.
    D. Wide spread rationing of credit at the going rate of interest.

36. If the conditions of the Heckscher-Ohlin theorem hold, with factors being immobile between countries, and incomplete specialization within countries, free trade will result in:
    A. equalization of relative factor prices.
    B. increase in relative price of labor in the capital-rich country.
    C. increase in the relative price of capital in the labor-rich country.
    D. widening of the gap between relative factor-prices in the two countries.

37. The effective rate of protection measures how much
    A. Investment will be drawn into the protected industry.
    B. Profits can be earned by producing the protected product.
    C. The margin of price over input cost for domestic producers can exceed the margin at world market prices.
    D. The price of the product increases due to the tariff.

38. To minimize deadweight efficiency losses, protection for infant industries should be provided through
    A. Subsidies.
    B. Quotas.
    C. Tariffs.
    D. an overvalued exchange rate.

39. The Tullock rectangle which measures the value of monopoly profits is associated with
    A. theory of Natural Monopoly.
    B. theory of a perfectly discriminating Monopolist.
    C. rent seeking behavior.
    D. welfare loss due to a monopoly market.

40. The Marshall-Lerner condition states that for devaluation to have a positive effect on a country's trade balance,
    A. sum of the elasticities of demand for a country's exports and of its demand for imports has to be greater than unity.
    B. sum of the elasticities of demand for a country's exports and of its demand for imports has to be less than unity.

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    C.   sum of the elasticities of demand for a country's exports and of its demand for imports has to be equal to unity.

    D.   sum of elasticities of demand for a country's exports and of its demand for imports has to be equal to zero.

41. Which of the following should be classified as a non-tradable?
    A. Rural road contraction services.
    B. Wheat production wholly consumed within the country.
    C. Computer equipment that cannot be produced locally.
    D. All the above.

42. The limit of the function, $f(x) = (1 - x)^3/(1 - x)$ as $x \to 1$, is
    A. 1
    B. 0
    C. ∞
    D. Indeterminate

43. Let $(X_1^t, P_1^t, X_2^t, P_2^t)$ be the prices and quantities in the year t and let $(X_1^b, P_1^b, X_2^b, P_2^b)$ be the quantities and prices in the base year. A situation where the Paasche quantity index is greater than 1 implies that:
    A. $P_1^t X_1^t + P_2^t X_2^t > P_1^t X_1^b + P_2^t X_2^b$
    B. $P_1^t X_1^b + P_2^t X_2^b > P_1^t X_1^t + P_2^t X_2^t$
    C. $P_1^b X_1^b + P_2^b X_2^b > P_1^b X_1^t + P_2^b X_2^t$
    D. $P_1^t X_1^t + P_2^t X_2^t > P_1^b X_1^t + P_2^b X_2^t$

44. The rank of the matrix, H, is equal to:

$$H = \begin{bmatrix} -3 & 6 & 2 \\ 1 & 5 & 4 \\ 4 & -8 & 2 \end{bmatrix}$$

    A. 2
    B. 3
    C. 4
    D. 0

45. Given a Utility function $U = XY$ with prices of the commodities P_x and P_y and the income of the consumer is M, and where U^0 is the value of U that solves Max U subject to, $X P_x + Y P_y = M$, the Hicksian compensated demand function for X is given by:
    A. $X = \{ M/ P_x\}^{1/2}$
    B. $X = \{ U^0 P_y / P_x\}^{1/2}$
    C. $X = \{ U^0 P_x / P_y\}^{1/2}$
    D. $X = U^0 P_x / P_y$

46. The measures of Marshallian Consumer Surplus, Compensated Variation in income and Equivalent Variation in income coincide if
    A. the Utility function is quasi-linear.

B. the substitution effects are zero.
C. the income elasticity of demand for the good is perfectly elastic.
D. the elasticity of demand for the good is less than unity.

47. If a consumer has a utility function $U(X_1, X_2) = X_1 X_2^4$. Then the fraction of income that he spends on X_1 is:
    A. 4/5
    B. 1/5
    C. 1/4
    D. Undeterminable. Requires additional information on prices.

48. The derivative of the function: $Y = \{3X^8 - 4X^7\} / 4X^3$ is given by:
    A. $3X^7 - 28X^2 / 12X$
    B. $3.5 X^4 - 4X$
    C. $3.75 X^4 - 4 X^3$
    D. $24X^7 - 28X^6$

49. Given the demand function $P = 42 - 5Q - Q^2$. Assuming that equilibrium price is 6, the value of the consumer's surplus is:
    A. 80
    B. (82) ⅔
    C. (82) ¾
    D. 86

50. Your vote is one in a million and the probability of it affecting the outcome of an election is negligibly small. The Rational Choice theory based on self-interest would predict that
    A. you would gather others like you to support your choice.
    B. nobody would vote.
    C. everyone would vote.
    D. you would form your own political party.

51. A strong Natural Monopoly is defined as one that
    A. cannot cover its costs of production under Marginal Cost pricing rule.
    B. can cover its costs of production under the Marginal cost pricing rule.
    C. is sustainable against entry.
    D. can make supernormal profits and still not attract entry.

52. An explanation of why stock returns consistently exceeded bond returns is given by:
    A. The Risk Aversion Hypothesis
    B. Loss Aversion Hypothesis
    C. Status Quo Bias Hypothesis
    D. Risk taking behaviour

53. In the treatment of inter-temporal choice, the stationary property of the discounted Utility approach implies that:

A. The choice between two states of the world x and x' wherein you are indifferent between the two at time t and t' remains the same for any t and t' (t' > t).
B. The choice between two states of the world x and x' wherein you are indifferent between the two at time t and t' applies only to these two periods.
C. The discount factor differs for different time periods.
D. The discount factor is equal to unity.

54. The long-run cost function for each firm that supplies the output Y is given by $C = Y^3 - 4Y^2 + 8Y$. If aggregate demand for the output is given by $Y = 2000 - 100P$, the equilibrium number of firms in a competitive industry will be equal to
   A. 100
   B. 200
   C. 500
   D. 800

55. The relative extremum of the function, $f(x) = 4x^2 - x$
   A. occurs at $x = 0$ and it is a relative minimum.
   B. occurs at $x = 1/8$ and it is an absolute minimum.
   C. occurs at $x = 6$ and it is a relative maximum.
   D. does not exist.

56. Which of the following is true?
   A. Because there are no transaction costs, the allotment of property rights is necessary in arriving at an efficient bargain solution.
   B. Institutions do not matter in a Walrasian world.
   C. Institutions do matter in a Walrasian world.
   D. All are true statements.

57. The Quadratic form: $Q = 2X^2 + 3Y^2 - Z^2 + 6XY - 8XZ - 2YZ$ is
   A. Positive definite
   B. Negative Definite
   C. Positive Semi-definite
   D. Indefinite

58. Which of the following statements is TRUE about the Harris-Todaro model on rural-urban migration?
   A. Creating new jobs invariably reduces urban unemployment.
   B. The urban wage has a lower bound which is lower than the rural wage.
   C. The direct policy of curing urban unemployment by employing more people in the urban sector may increase unemployment.
   D. Workers are assumed to act in ways that maximize their value of urban earnings.

59. Traditional arguments of Smith and Marshall that explain stagnation in agriculture argue that,
   A. tenants in a fixed tenancy system will be less likely to undertake innovations where as a share tenancy would be subject to innovations.
   B. a landlord will not undertake innovations as it might very well lower his net income.

C. share tenancy would be relatively stagnant as compared to a fixed tenancy system.

D. a landlord will undertake innovations as it will increase his net income.

60. Milton Friedman's criticism of the infant industry argument that if expectation of success is realistic, then they should be prepared to take losses presumes that,

    A. capital markets are perfect.

    B. labour markets are perfect.

    C. the technology is scale neutral.

    D. entrepreneurs are risk takers.

61. The cost function given by: $C(X,Y) = X^{1/4} + Y^{1/4} - \{XY\}^{1/4}$

    A. only exhibits economies of scale for all output levels but diseconomies of scope.

    B. only exhibits economies of scope but diseconomies of scale.

    C. exhibits neither economies of scope nor economies of scale.

    D. exhibits both economies of scope and scale.

62. Hotellings theorem states that if the expenditure function E(.) is differentiable then

    A. the Marshallian demand functions are obtainable by partial differentiation of E(.) with reference to price.

    B. the Hicksian compensated demand functions are obtainable by partial differentiation of E(.) with reference to quantity.

    C. the Hicksian compensated demand function are obtainable by partial differentiation of E(.) with reference to price.

    D. the indirect utility function is obtainable by partial differentiation of E(.) with reference to price.

63. The regression equation necessarily represents

    A. the correlation between variables.

    B. causality between variables.

    C. an economic identity.

    D. a quantitative relationship between variables.

64. In statistical testing of hypothesis, Type-II error refers to

    A. the probability of rejecting the null hypothesis when it is true.

    B. the probability of accepting the null hypothesis when it is true.

    C. the probability of accepting the null hypothesis when it is false.

    D. none of the above.

65. If $y = e^{e^x}$, then x is equal to

    A. $\log_e(\log_e y)$

    B. e^y

    C. $e^{\log_e y}$

    D. $\log_e y$

66. You have a $ 10,000 deposit in a US bank. The rate of interest in USA is 10%, and the Re/$ exchange rate moves from Rs. 50 per $ to Rs. 51 per $ over the year. The Rupee rate of return on your foreign deposit is
    A. 12%
    B. 20%
    C. 10%
    D. 2%

67. The variance of 2, 3, 4 is
    A. $\sqrt{29}$
    B. 2/3
    C. $\left(\dfrac{1}{2}\right)^{\frac{1}{2}}$
    D. 0

68. Multi-collinearity problem arises due to
    A. correlation of errors.
    B. correlation between explanatory variables and error terms.
    C. correlation between dependent and independent variables.
    D. correlation among explanatory variables.

69. Let X be a variable with mean, m, and standard deviation, s. If a constant 'c' is now added to each of 'n' observations on 'X', then the mean and standard deviation of the variable are:
    A.   m, s
    B.   m + c, s
    C.   m+c, s+c
    D.   m + c/n, s + c/n

70. In a linear homogeneous production function, the sum of output elasticities with respect to inputs must be:
    A. Unity
    B. Zero
    C. Negative
    D. Greater than one

71. The CPI has increased from 300 to 330 and money wages for agricultural labour have increased from Rs. 40 to Rs. 47 per day. Which of the following is necessarily true?
    A. Agricultural wage employment has increased.
    B. Real wages have increased.
    C. Proportion of persons below poverty line has declined.
    D. Labour productivity has increased.

72. What is the probability of a sum of numbers in two throws of a dice being 7?
    A. 1/36
    B. 1/18

C. 1/9
D. 1/6

73. The matrix,
$$\begin{bmatrix} 5 & 1 \\ 1 & 2 \end{bmatrix} \text{ is}$$
    A. negative definite
    B. positive definite
    C. indefinite
    D. none of the above

74. If A and B are two events with probabilities of occurrence as
$P(A) = 0.6$, $P(B) = 0.4$, and $P(A \cap B) = 0.2$, then $P(A|B)$ is
    A. 1/3
    B. 1/2
    C. 1
    D. 0

75. Which of the following is not a necessary condition for the OLS estimator to be BLUE?
    A. The error terms have zero mean.
    B. The error terms are independently distributed.
    C. The error terms have identical distribution.
    D. The error terms are normally distributed.