

ENTRANCE TEST FOR Ph.D. PROGRAMME, 2023**ECONOMICS**

Time : Three Hours

Maximum : 100 Marks

Part A*Answer all questions.**Each question carries 1 mark.*

Choose the correct answer from the choices :

1. The conditions of equilibrium of a firm are :
 - (A) $AC = MC$ with negative slope of MC .
 - (B) $AR = MC$ with positive slope of MC
 - (C) $MR = MC$ with positive slope of MC .
 - (D) $MR = MC$ with negative slope of MC .
2. The Average Revenue (AR) of a monopoly firm is :
 - (A) Always more than the Marginal Revenue (MR).
 - (B) Always less than the MR.
 - (C) Equal to the MR.
 - (D) Sometimes more and sometimes lesser than the MR.
3. Which of the following is not an objective of fiscal policy in a developing country ?
 - (A) Accelerating the rate of capital function without inflation.
 - (B) Accelerating investment.
 - (C) Maintain full employment.
 - (D) Price stability.
4. As capital stock increases, the Marginal Efficiency of Capital (MEC) :
 - (A) Increases.
 - (B) Decreases.
 - (C) Increase in the beginning later start decreasing.
 - (D) Remains constant.

Turn over

5. In Walrasian general equilibrium model, all prices and quantities in all markets are determined :
- (A) Independently. (B) Simultaneously.
(C) One after another. (D) Separately.
6. The dynamic theory of profit by J.B. Clark says :
- (A) Profit is due to expectations under conditions of uncertainty.
(B) Profit is because of the risk of entrepreneur.
(C) Profit is the result of innovation.
(D) Profit is the difference between price and cost of production.
7. Which one of the following statistical techniques could be used to assess the impact of change in input use on crop yield ?
- (A) Correlation co-efficient. (B) Standard deviation.
(C) Co-efficient of variation. (D) Regression.
8. A Regression function with four independent variables has been computed for 25 observations. What are the degrees of freedom for numerator and denominator in F test process ?
- (A) 4 and 21 respectively. (B) 4 and 20 respectively.
(C) 3 and 20 respectively. (D) None of these.
9. In the presence of heteroscedasticity, the best linear unbiased estimators are provided by the method of :
- (A) Maximum likelihood estimator. (B) OLS.
(C) Indirect least square. (D) Weighted least square.
10. The dominant objective of Monetary Policy is :
- (A) Money Supply. (B) Controlling Demand for Money.
(C) Achieving Price Stability. (D) Promoting Foreign Trade.
11. If the price elasticity of demand for a product is perfectly inelastic, the entire tax incidence will be on :
- (A) The buyers.
(B) The sellers.
(C) Shared between the buyers and sellers.
(D) The government.

12. Milton Friedman's quantity theory of money consists of :
- (A) Bonds. (B) Equities.
(C) Human capital. (D) All the above.
13. A rise in the median age of population is known as :
- (A) Demographic Transition. (B) Demographic Ageing.
(C) Demographic Instability. (D) Demographic Momentum.
14. HDI is not composed of :
- (A) Longevity. (B) Human freedom.
(C) Literacy. (D) Level of income.
15. Harrod-Domar Model was adopted in which Five Year Plan of the following in India ?
- (A) Ninth Five Year Plan. (B) Third Five Year Plan.
(C) Second Five Year Plan. (D) First Five Year Plan.
16. 'Residex' is associated with :
- (A) Share prices. (B) Mutual fund prices.
(C) Product prices. (D) House prices.
17. Arrange the following theories in order in which they appeared :
- 1 Leontief Paradox.
 - 2 Absolute Cost Advantage Theory.
 - 3 Factor Endowment Theory.
 - 4 Comparative Cost Advantage Theory.
- (A) 1, 3, 2, 4. (B) 2, 3, 4, 1.
(C) 2, 4, 3, 1. (D) 1, 4, 2, 3.
18. Given Q = Output, and L = Number of Labour, then Q/L is :
- (A) Total product. (B) Average product.
(C) Marginal product. (D) Labour ratio.

Turn over

19. The concept of "Reserve Army" is found in :
- (A) Classical analysis. (B) Hicksian analysis.
(C) Schumpeterian analysis. (D) Marxian analysis.
20. Which of the following is TRUE of an unregulated monopolist ?
- (A) $P < MC$. (B) $P > AR$.
(C) $P > MR$. (D) $P = AC$.
21. According to Milton Friedman, Quantity Theory of Money is the theory of :
- (A) Prices. (B) Income.
(C) Demand for Money. (D) Supply of Money..
22. For controlling inflation, the Central Bank should :
- (A) Lower the Bank Rate.
(B) Sell government securities in the open market.
(C) Purchase government securities in the open market.
(D) Lower the Reserve Ratio of the banks.
23. Credit deadlock refers to a state when :
- (A) Credit is available, but borrowers are scarce.
(B) Banks close their loan window.
(C) There are more borrowers and less credit.
(D) A steep rise in bank rate.
24. Laffer curve studies the relationship between :
- (A) Tax rate and expenditure. (B) Tax rate and tax revenue.
(C) Tax rate and consumption. (D) Tax rate and welfare.
25. In the opportunity cost theory of International Trade, the production possibility curve which is concave to the origin indicates :
- (A) Increasing opportunity cost. (B) Decreasing opportunity cost.
(C) Constant opportunity cost. (D) Changes in the opportunity cost.

26. Which of the following is the fertility rate in the age group of 15-19 years in 2016 as reported by Sample Registration System of India ?
- (A) 12.3. (B) 6.7.
(C) 10.7. (D) 8.2.
27. Which one of the following awards is associated with an outstanding work in the field of agriculture ?
- (A) Boliver Award. (B) Borlang Award.
(C) Pulitzer Award. (D) Magsaysay Award.
28. Who propounded Wage-Goods Model ?
- (A) Maurice Dobb.
(B) A. K. Sen.
(C) C. N. Vakil and P. R. Brahmananda.
(D) P. C. Mahalanobis.
29. Deposit multiplier is defined as :
- (A) $k = \frac{1}{r}$. (B) $k = r$.
(C) $r = \frac{1}{k} - 1$. (D) $k = 1 - r$.
30. The benefits of the goods which spread beyond immediate recipient are known as :
- (A) Non-merit goods. (B) Merit goods.
(C) Free goods. (D) Club goods.
31. The regression equation fitted to a sample data is given as ; $Y = 5 - 0.1 X$. What is the value of the residual for an observation for which observed values of Y and X are 20 and 100 respectively ?
- (A) 15. (B) 20.
(C) 25. (D) - 25.
32. Supply side tax policy is associated with the name of :
- (A) Robert Lucas. (B) Aurther Laffer.
(C) Stanley Fisher. (D) A.W. Phillips.

Turn over

33. The government of India adopted zero base budgeting since April :
- (A) 1980. (B) 1988.
(C) 2000. (D) 1987.
34. The value of Durbin Watson d statistics :
- (A) Ranges from -1 to $+1$. (B) Ranges from 0 to 1.
(C) Ranges from $-\alpha$ to $+\alpha$. (D) Ranges from 0 to 4.
35. Which of the following is not a development expenditure of the State ?
- (A) Debt services. (B) Medical and health.
(C) Development of agriculture. (D) Education.
36. The model in which Y depends on current and previous time period error term is :
- (A) AR (1) model. (B) Single equation model.
(C) ARMA (1, 1) model. (D) MA (1) model.
37. Test statistic used to distinguish trend stationary and difference stationary is :
- (A) Engle-Granger test. (B) Dickey-Fuller test.
(C) F-test. (D) Error Correction Mechanism.
38. What among the following are the determinants of price elasticity of demand ?
- 1 Nature of the good,
 - 2 Price of related goods.
 - 3 Government policy.
 - 4 Proportion of income spent on the good.
- (A) 1, 2, 3 and 4. (B) 1, 2 and 3 only.
(C) 2, 3 and 4 only. (D) 1, 2 and 4 only.

39. Which of the following tools are available to Central bank for the control of money supply ?

- 1 Variation in bank rate.
- 2 Cleaning house operations.
- 3 Changes in statutory liquidity rate.

(A) 1, 2 and 3. (B) 1 and 3.
(C) 2 and 3. (D) 1 and 2.

40. Arrange the following growth models in a chronological order :

- 1 Kaldor Model.
- 2 Solow Model.
- 3 Meade Model.
- 4 Harrod Model.

(A) 4, 2, 1, 3. (B) 1, 2, 3, 4.
(C) 4, 3, 2, 1. (D) 3, 4, 1, 2.

41. Arrange the following in the chronological order of their establishment :

- 1 UNCTAD.
- 2 WTO
- 3 GATT.
- 4 IBRD.

(A) 1, 3, 4, 2. (B) 4, 3, 1, 2.
(C) 1, 2, 3, 4. (D) 4, 3, 2, 1.

42. Foreign trade multiplier can be expressed as :

(A) $Y = C + I + X + M$. (B) $Y = C + I + X - M$.
(C) $Y = C - 1 + X - M$. (D) $Y = C + I - X + M$.

43. Theory of Customs Union was first developed systematically by :

(A) Jacob Viner. (B) Haberler.
(C) Lipsey. (D) Vanek.

Turn over

44. The effect of the increase in the supply of only one factor on the production of commodity is explained by :
- (A) Rybezynski's theorem. (B) J. Bhagawati's theorem.
(C) Ricardian theory. (D) Adam Smith's theory.
45. Moving Average is used in :
- (A) Dispersion. (B) Correlation.
(C) Time series analysis. (D) Hypothesis Testing.
46. The variance of binomial distribution is :
- (A) npq . (B) np .
(C) pq . (D) \sqrt{npq} .
47. The probability of rejecting a true hypothesis is :
- (A) Type-I error. (B) Type-II error.
(C) Standard error. (D) Probable error.
48. Geometric Mean gives more weight to :
- (A) Smaller items. (B) Larger items.
(C) Both (A) and (B). (D) None of these.
49. The rate at which the RBI accepts funds from other banks is called :
- (A) Repo rate. (B) Reverse Repo rate.
(C) Bank rate. (D) Cash reserve ratio.
50. A Regression function with four independent variables has been computed for 25 observations. What are the degrees of freedom for numerator and denominator in F test process ?
- (A) 4 and 21 respectively. (B) 4 and 20 respectively.
(C) 3 and 20 respectively. (D) None of these

(50 × 1 = 50 marks)

Part B

*Answer any ten questions:
Each question carries 5 marks.*

51. Distinguish between Research Methodology and Research Methods.
52. Discuss probability and non-probability sampling.
53. What is research design ? Discuss the elements of research design for experimental studies.
54. State the various functional forms of regression model. Which functional form of regression model would you like to use to estimate India's rate of growth of per capita income ?
55. How can one test the precision and reliability of results in sampling theory ?
56. What do you mean by hypothesis ? Is it necessary to formulate hypothesis in every research study in social sciences ?
57. How is random sampling procedure helpful in making unbiased estimation ? Illustrate with the help of an example.
58. What is auto-correlation ? How is it detected ? What are the remedial measures to handle auto-correlation ?
59. What is a non-parametric test ?
60. Distinguish between Ratio scale and interval scale of measurement.
61. What do you understand by 'Sampling Frame' ? List the various stages involved in planning and organising a survey.
62. Distinguish between Census and Sample Survey.
63. Distinguish between Purposive and Snowball Sampling.
64. What is Multicollinearity ? How can you tackle this problem ?

(10 × 5 = 50 marks)