

Y-92

**Entrance Examination - 2020  
M.Phil/Ph.D. ECONOMICS**

**Time: 2 Hours**

**Max. Marks: 70**

**HALL TICKET NUMBER**

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**INSTRUCTIONS**

1. **Read the instructions carefully before answering.**
2. Enter your Hall Ticket Number on this page and also on the OMR answer sheet.
3. Answers are to be marked on the OMR answer sheet following the instructions provided thereon.
4. Handover the OMR answer sheet at the end of the examination, to the invigilator.
5. There are 70 questions in this paper. The question paper has **two** parts: **PART-A** and **PART-B**. **PART-A** contains 35 questions and **PART-B** also contains 35 questions. Marks obtained in PART-A will determine the merit rank in case of a tie in the total number of marks obtained.
6. Each correct answer carries **one** mark. There is no negative marking.
7. The question paper contains 17- pages including the cover page and pages for rough work.

PART-A

1. A method of assigning probabilities, which assumes that the experimental outcomes are equally likely is referred to as the

- A. Objective method
- B. Classical method
- C. Subjective method
- D. Experimental method

2. When the results of experimentation or historical data are used to assign probability values, the method used to assign probabilities is referred to as the

- A. Relative frequency method
- B. Subjective method
- C. Classical method
- D. Posterior method

3. Factor analysis is used in situations where

- A. Independent variables are correlated
- B. Dependent variables are correlated
- C. Both of the above
- D. None of the above

4. Heteroscedasticity occurs when

- A. The variance of the errors is not constant
- B. The variance of the dependent variable is not constant
- C. The errors are not linearly independent of one another
- D. The errors have non-zero mean

5. Match list I (measures of Dispersion, with List II (Characteristics) and select the correct answer using the codes given below the lists:

List I (Measures of Dispersion)

List II (Characteristics)

- A. Range
- B. Varaince
- C. Coefficient of Variation
- D. Inter-quartile Range

- 1. Relative measure of dispersion
- 2. Uses limits information
- 3. Standared Deviation
- 4. Lower than Range
- 5. Greater than Range

	A	B	C	D
A.	1	4	5	3
B.	2	4	1	3
C.	1	3	5	4
D.	2	3	1	4

6. Economic agents are assumed to be rational. Such assumptions methodologically are known as:

- A. Empiricism
- B. General law
- C. Apriorism
- D. Instrumentalism

7. *Ceteris Paribus* assumption frequently used in mainstream methodology resembles the use of assumption of *ideal conditions* in hard sciences. Which of the following statement is correct in this regard?

- A. Like *Ideal Conditions* in hard sciences, *ceteris paribus* is also exactly specified.
- B. Unlike *Ideal conditions* in hard sciences, *ceteris paribus* is never exactly specified.
- C. Both are unspecified in hard sciences as well as in economics.
- D. Unlike *Ideal conditions* in hard sciences, *ceteris paribus* is always exactly specified.

8. In econometric testing a null hypothesis is meant to be rejected to validate a hypothesis. Which of the following method of validation is being followed here?

- A. Verification
- B. Induction
- C. Deduction
- D. Falsification

9. Milton Friedman claimed that neoclassical theory is generally valid as long as it predicts well, even if its assumptions are not tested. Such an approach to a theory building is known as

- A. Instrumentalism
- B. Conventionalism
- C. Operationalism
- D. Doctrinalism

10. Assertion (A): Stratified sampling technique is generally applied in order to obtain a representative sample.

Reason (R): Stratified sampling technique is used when population is homogeneous.

- A. Both A and R are individually true and R is the correct explanation of A
- B. Both A and R are individually true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true

11. The method of social inquiry followed by Karl Marx in his critique of capitalist economy involved

- A. Historical method

- B. Dialectical method
- C. Political economy
- D. All of the above

12. All husbands are married men. Such a statement is called

- A. Truism
- B. Causal law
- C. Proposition
- D. All of them

13. Read the statements: "All flowers are red. Rose is a flower. Hence rose is red". The inference involved in the above is based on a logic of:

- A. Induction
- B. Abduction
- C. Deduction
- D. Adduction

14. Saving for an individual is good. But it is not good for society as whole. This statement of Keynes is an example of :

- A. Fallacy of compositions
- B. Hume's Problem
- C. Straw Man fallacy
- D. Syllogism

15. Which of the following is an example of a proposition:

- A. Excess money supply causes inflation
- B. Fixed deposits are a part of M3
- C. Finance Ministry officially declared defence open for FDI
- D. Mumbai is the headquarters of RBI

16. Elinor Ostrum, the first woman ever to win a Nobel Prize in economics in 2009, famously contributed to field of:

- A. Monetary economics
- B. Macroeconomics
- C. Financial Economics
- D. Common Property Economics

17. The presumption that economic phenomenon in society exists independent of social dimensions is known as

- A. *Homoeconomicus*
- B. *Ceteris Paribus*
- C. *Reductio ad Absurdum*

D. All of the above

18. Which among the following, according to Milton Friedman, is a desirable property of a good theory?

- A. Realism of assumptions
- B. Predictive ability of the theory
- C. Internal structure of theory
- D. Mathematical elegance of the theory

19. An argument can have

- I. only one conclusion
- II. many conclusions
- III. only one or two premises
- IV. any number of premises

- A. I and III are true
- B. I and IV are true
- C. II and III are true
- D. II and IV are true

20. A, B and C are sets as given below:  $A = \{ \emptyset \}$ ,  $B = \{ 0 \}$ ,  $C = \{ 1 \}$ , where  $\emptyset$  is null set. Let  $n(X)$  be number of elements in a finite set X. Which of the following statements is correct?

- I. A is a null set
- II. A is a subset of B
- III.  $n(B) < n(C)$
- IV.  $n(A) = n(B) \cdot n(C)$

- A. I and II
- B. II and III
- C. I only
- D. IV only

21. In a valid inductive argument the conclusion follows from the premise/s

- A. Necessarily
- B. Contingently
- C. Both necessarily and contingently
- D. Neither necessarily nor contingently

22. Let A be a 3x3 symmetric matrix with three distinct positive eigen values and let the corresponding normalized eigen vectors be,  $v_1, v_2,$  and  $v_3$ . Let matrix  $V = (v_1 \ v_2 \ v_3)$ , with the eigen vectors being the three column vectors of the matrix V. Which of the following are true?

- I. A is positive definite
- II.  $v_i^T \cdot v_j = 0$ , for all  $i \neq j$ .

- III.  $V^TAV$  is a diagonal matrix
- IV.  $V^T = V^{-1}$ .

- A. II and IV
- B. I, II, III, and IV
- C. II and III
- D. I, II and III

23. Solve  $f(x) = e^{-2(x^3-x)} - 1$ :

- I.  $x = -2$ .
- II.  $x = -1$ .
- III.  $x = 0$ .
- IV.  $x = +1$ .
- V.  $x = +2$ .

- A. I and V
- B. II, III and IV
- C. II, IV and V
- D. I, II and IV

24. Which of the following is relevant for testing for the problem of autocorrelation in regression analysis?

- A. z-statistic
- B. DW statistic
- C.  $\chi^2$  (chi-square) statistic
- D. t-statistic

25. Match the estimator properties (LIST-1) with the description of them (LIST-2):

- LIST-1
- I. Unbiasedness
  - II. Efficiency
  - III. Consistency
  - IV. Sufficiency

- LIST-2
1. Converges in probability to parameter value as sample size increases
  2. Contains all information available in the sample
  3. Lowest variance in its class of estimators
  4. Expected value of estimator equal to parameter

	I	II	III	IV
A.	1	3	2	4
B.	3	1	4	2
C.	4	3	1	2
D.	2	4	3	1

26. The following has strict analytical priority with respect to equilibrium

- A. Stability
- B. Existence
- C. Uniqueness

D. None of the above

27. Sunrisers Hyderabad wins with probability of 0.6, loses with probability of 0.3 and ties with probability of 0.1. The team plays three games in the IPL. What is the probability that the team wins at least twice and does not lose?

- A. 0.036
- B. 0.108
- C. 0.216
- D. 0.324

28. A dance class contains 10 boys and 20 girls of which half the boys and half the girls are Kuchipudi dancers. What is the probability that a person chosen at random is a boy or a Kuchipudi dancer?

- A. 1/2
- B. 1/3
- C. 2/3
- D. 1/6

29. In Italy the number of COVID19 patient was found to be  $4 \times 10^6$  at noon of 28<sup>th</sup> February. At noon of 29<sup>th</sup> February the number was  $9 \times 10^6$ . If the number increased at constant rate per hour, how many people were affected at the intervening midnight?

- A.  $5 \times 10^6$
- B.  $6 \times 10^6$
- C.  $7 \times 10^6$
- D.  $8 \times 10^6$

30. Power of the test is:

- A.  $1 - P$  [Accept the Null Hypothesis ( $H_0$ ) when  $H_0$  is wrong]
- B.  $P$  (Accept  $H_0$  when  $H_0$  is wrong)
- C.  $1 - P$  (Accept  $H_0$  when  $H_0$  is true)
- D.  $P$  (Accept  $H_0$  when alternative hypothesis  $H_1$  is true)

31. The Koyck approach is one of the methods, which can be used

- A. In the estimation of the static model
- B. In selecting statistically significant intercept terms in a big regression model
- C. In the estimation of the distributed lag models
- D. None of the above

32. The correlation coefficient between two variables  $P_i$  and  $Q_i$  is 0.80 and their covariance is 20. If the variance of  $P_i$  series is 16, the standard deviation of  $Q_i$  series is

- A. difficult to determine from the above data information.
- B. 1.563

- C. 4.000
- D. 6.250

33. Suppose you deposit Rs.100/- in an open ended debt mutual fund that yields 10% return, compounded annually. How much will you realize if you redeem all your units after 2 years?

- A. Rs. 121
- B. Rs. 125
- C. Rs. 221
- D. Rs. 120

34. Fisher's Ideal index number is

- A. arithmetic mean of Laspeyer's and Pasche's index
- B. harmonic mean of Laspeyer's and Pasche's index
- C. geomtric mean of Laspeyer's and Pasche's index
- D. none of the above

35. If Heteroscedasticity is present in a regression model but ignored, the OLS estimator will be

- A. Biased
- B. Inconsistent
- C. Inefficient
- D. All of the above

#### PART-B

36. Which of the following change is brought in IS Curve by an increase in government expenditure

- A. Will increase the slope of the IS curve
- B. Will decrease the slope of the IS curve
- C. Will shift IS curve downwards
- D. Will shift IS curve upwards

37. If there is a liquidity trap existing in the economy, the shape of the LM curve is :

- A. Vertical
- B. Sloping upwards
- C. Sloping Downwards
- D. Horizontal

38. John Maynard Keynes argued that investment demand in economy is:

- A. Determined by the real interest rate
- B. Determined by the nominal interest rate
- C. Determined by expectations of the entrepreneurs
- D. Determined by technology

39. Bad cars drive good cars out of second hand car market. George Akerlof called this as an example of:
- Paradox of car market
  - Problem of Lemons
  - Problem of additivity
  - Problem of private goods
40. Let a 2-good exchange economy be such that individual utility functions are strictly quasi-concave and strictly monotonous increasing. Then,
- the set of core allocations and the set of competitive allocations are both non-empty.
  - the set of core allocations and the set of competitive allocations are both empty.
  - the set of core allocations is empty but the set of competitive allocations is non-empty.
  - the set of core allocations is non-empty but the set of competitive allocations is empty.
41. According to Real Business Cycles model, employment in an economy may decline due to:
- lack of demand
  - liquidity trap
  - adverse climate conditions
  - technology shock
- I, II and IV are true
  - II is true
  - III and IV are true
  - I and III are true
42. Which of the following measures of income inequality is sensitive to lower incomes?
- Atkinson index
  - Gini coefficient
  - Coefficient of variation
  - Relative quartile deviation
43. What is the difference between Cournot and Bertrand model of competition in terms of equilibrium prices?
- In cournot model Bertrand models of oligopoly prices will be above marginal cost
  - In cournot model, prices will be above marginal cost, while for Bertrand model prices will be equal to marginal cost
  - In cournot model, prices will be above marginal cost, while for Bertrand model prices will also be above marginal cost
  - In cournot model, prices will be equal to marginal cost, while for Bertrand model prices will also be above marginal cost

44. Match the following authors (LIST-1) with the books written by them (LIST-2):

LIST-1		LIST-2	
I. Leon Walras		1. The Economic Consequences of the Peace	
II. Adam Smith		2. Principles of Economics	
III. John M Keynes		3. Capitalism, Socialism and Democracy	
IV. Joseph A Schumpeter		4. The Theory of Moral Sentiments	
V. Alfred Marshall		5. Elements of Pure Economics	

	I	II	III	IV	V
A.	2	5	3	4	1
B.	5	4	1	3	2
C.	4	2	5	1	3
D.	5	4	2	3	1

45. Who headed the National Planning Committee formed in 1938 by Indian National Congress?

- A. J L Nchru
- B. J C Kumarappa
- C. P C Mahalanobis
- D. V K R V Rao

46. Which Indian state(s), in the most recent years, is/are estimated to produce the highest amount of pulses; the highest amount of oilseeds?

- A. Rajasthan (pulses); Gujarat (oilseeds)
- B. Rajasthan (both pulses and oilseeds)
- C. Madhya Pradesh (pulses); Rajasthan (oilseeds)
- D. Madhya Pradesh (both pulses and oilseeds)

47. According to Adam Smith,

- A. rate of interest is comparatively high in rich and growing societies
- B. rate of interest is comparatively high where the moneylenders are well entrenched
- C. rate of interest is comparatively high where banking is well established
- D. rate of interest is comparatively high in poor and stagnating societies

48. Given inverse demand function,  $p^2 = 1000.q^{-3}$ ,  $p > 0$ ,  $q > 0$ , where  $p$ ,  $q$  are respectively price and quantity. Then as price increases, the absolute magnitude of price elasticity of demand,  $|e_p|$ ,

- A. remains constant
- B. increases
- C. decreases
- D. first increases and then decreases (for  $p > 1$ ).

49. If the exchange rate changes from 70 Rupees per dollar to 80 Rupee per dollar,

- A. The dollar has appreciated

- B. The dollar has depreciated
- C. Rupee has appreciated
- D. None of the above will occur

50. Which of the following is TRUE for MUDRA?

- A. MUDRA finances through Banks, MFIS and NBFCs.
- B. MUDRA is not engaged in refinance
- C. MUDRA is not an NBFC
- D. MUDRA directly lends to farmers

51. In Keynes' theory, the level of employment is determined by conditions in

- A. Labour market
- B. Money market
- C. Goods market
- D. Bond market

52. Which Indian economist argued that Keynes' policy of deficit financing would be inflationary if supply constraints are binding?

- A. D R Gadgil
- B. V K R V Rao
- C. B R Ambedkar
- D. K. N Raj

53. The likely growth rate of the economy is \_\_\_\_ if the saving rate is 30 percent and the incremental capital-output ratio is 3.

- A. 9 percent
- B. 27 percent
- C. 33 percent
- D. 10 percent

54. The concept of 'key sector' in industrial development is due to

- A. Hirschman
- B. Lewis
- C. Nurkse
- D. Rosenstein-Rodan

55. In Hicks neutral technical progress, the ratio of marginal product of capital to the marginal product of labour remains unchanged. The point of comparison is made at

- A. Constant Capital – Labour ratio
- B. Constant Capital-Output ratio
- C. Constant Labour – Output ratio
- D. Constant growth of output

56. Which type of disembodied technical progress is consistent with steady stage growth?

- A. Hicks neutral Technical Progress
- B. Solow Neutral Technical Progress
- C. Harrod Neutral Technical Progress
- D. Robison's Neutral Technical Progress

57. In endogenous growth models of research and development, the share of population working in research is never optimal, which one of the following is not the cause of this non-optimality?

- A. 'Stepping on toes' effect
- B. Consumer Surplus effect
- C. Missing market
- D. Complete market

58. In Kaldor's theory of growth and Income distribution, the final relation among capitalists savings rate, rate of profit and growth,  $g = rs_c$  is derived under the special assumption of

- A. Workers saving propensity,  $s_w = 1$
- B. Workers saving propensity,  $s_w = 0$
- C. Capitalists saving propensity,  $s_c = 1$
- D. Capitalists saving propensity,  $s_c = 0$

59. The Bhaduri and Marglin post Kaleckian growth model challenged the canonical Kaleckian growth model by recasting the investment function as a function of

- A. Rate of utilization and the profit share
- B. Rate of utilization and the profit rate
- C. Rate of utilization and the wage share
- D. Rate of utilization and the wage rate

60. Consider the following statements

1. Scheduled banks are usually in the form of private, foreign and nationalised banks.
2. Non- Scheduled banks are subject to the statutory cash reserve requirement.
3. The Reserve Bank of India has the function of controlling commercial banks and various other economic activities
4. As per RBI act 1934, it is mandatory that every NBFC should be registered with RBI to commence or carry on any business.

Of these statements are correct \_\_\_\_.

- A. 1 and 3
- B. 1, 2 and 3
- C. 1, 3 and 4
- D. 1, 2, 3 and 4

61. The index of cropping intensity is defined as the

- A. ratio of gross irrigated area to net irrigated area
- B. ratio of net cropped area to net irrigated area
- C. ratio of gross cropped area to net sown area

- D. ratio of price index to crop area index
62. In Indian economy, the green revolution aimed at achieving self-sufficiency in foodgrains but the yellow revolution is associated with which of the following?
- Edible Oilseeds
  - Yellow paddy
  - Potato
  - Chillies
63. The Revenue Neutral Rate (RNR) refers to a
- multiple-tax-rate system that allows the government to receive the same amount of tax revenue pre- and post tax reforms.
  - single tax rate that allows the government to receive the same amount of tax revenue despite the changes in tax laws
  - tax system which has neutral impact on the reserve money of RBI
  - tax rate adopted under the Goods and Services Tax (GST) in India
64. The first welfare theorem: resource allocation is Pareto efficient, if
- the markets are perfectly competitive
  - the markets are perfectly competitive and with no technological externality
  - the markets are perfectly competitive market, with no technological externality and no market failure related to uncertainty
  - the markets based allocation are always efficient
65. The indirect utility function is
- the maximum utility attainable at given prices
  - the maximum utility attainable at given prices and income
  - the maximum utility attainable at given income
  - A potential economic problem that arises when government wants to auction land for oil drilling is
66. Which one of the following is not an essential assumption of Coase theorem?
- No strategic behavior
  - Voluntary exchanges
  - No endowment effect
  - Sunk cost is zero
67. Which one of the following is not a feature of "Value Added Tax"?
- It is a multi-point destination based system of taxation.
  - It is a tax levied on value addition at each stage of transaction in the production distribution chain.
  - It is a tax on the final consumption of goods or services and must ultimately be borne by the consumer.

D. It is basically a subject of the Central Government and the State Governments are only a facilitator for its successful implementation.

68. Which of the following is a credit in the Indian Current Account?

- A. A Indian consumer buys a TV made in Japan
- B. Singapore Airlines buys a Hindustan Aeronautics Ltd plane made in the India
- C. British investors purchase Indian government bonds
- D. An Indian Citizen flies to Qatar on Qatar Airlines

69. The rate of exploitation in any society is defined by

- A. The ratio of Constant to Variable capital.
- B. The ratio of Surplus value to Variable Capital.
- C. The ratio of Surplus labour to Necessary labour.
- D. All of the above

70. One of the most important parts of Lenin's Theory of Imperialism is

- A. Merger of Banking capital and Industrial capital.
- B. The coalescence of fixed capital and Circulating capital
- C. The Export of raw material to other countries.
- D. None of the above.

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