

2021/TDC/CBCS/ODD/ ECOSEC-301T/457

TDC (CBCS) Odd Semester Exam., 2021 held in March, 2022

ECONOMICS

(3rd Semester)

Course No.: ECOSEC-301T

(Data Analysis)

Full Marks: 50
Pass Marks: 20

Time: 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any fifteen of the following questions:

 $1 \times 15 = 15$

- 1. Define sample from the statistical viewpoint.
- 2. State one example of random sampling.
- 3. Mention one advantage of sample survey.

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(Turn Over)

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- 4. Mention one essential of a good schedule.
- 5. Which measure of central tendency represents the middle of the data set?
- 6. Mention the relationship between mean, median and mode.
- Mention one characteristic of a good measure of dispersion.
- 8. What is variance?
- 9. What is sample space?
- 10. What do you mean by mutually exclusive events?
- 11. Define continuous random variable.
- 12. What will be the probability of getting odd numbers if a dice is thrown?
- 13. What is an interval estimate?
- 14. What is statistical inference?
- 15. What is meant by standard error of a statistic?

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- 16. What does the property of 'unbiased' of an estimate mean?
- 17. Which index number is called an ideal index number?
- 18. What is a general purpose index number?
- 19. What is meant by 'base year' in the context of index number theory?
- 20. Mention the name of index number which is used to assess the purchasing power of money.

SECTION-B

Answer any five of the following questions: $2\times5=10$

- 21. Mention two disadvantages of population census.
- 22. Define stratified random sampling.
- 23. Define correlation coefficient.
- 24. Mention two relative measures of dispersion.
- 25. What is conditional probability?

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- 26. Illustrate the concept of exhaustive event.
- 27. Mention two differences between point estimate and interval estimate.
- 28. Define confidence interval.
- 29. State the formulae of Laspeyres' index and Paasche's index.
- 30. Write two uses of index number.

SECTION—C

Answer any *five* of the following questions: $5 \times 5 = 25$

- **31.** Distinguish between population census and sample survey.
- 32. Mention the different methods of random sampling. Explain any one of them.
 2+3=5

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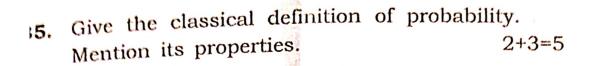
- **33.** Prove that $AM \ge GM \ge HM$.
- 34. Define arithmetic mean. Calculate arithmetic mean for the following frequency distribution:

 2+3=5

Class : 0-10 10-20 20-30 30-40 40-50

Frequency: 2 5 9 3 2

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36. Prove that for any two events A and B we have

$$P(A + B) = P(A) + P(B) - P(AB)$$
 5

- 37. Distinguish between parameter and statistics.
- 38. What is point estimate? Mention the criterion of a good estimator. 1+4=5
- 39. Explain the different methods of construction of index number. 5
- 10. Show that Fisher's price index number satisfies both the time reversal test and the factor reversal test.

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