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 : 1×15=15

1. Define sample from the statistical viewpoint.

2. State one example of random sampling.

3. Mention one advantage of sample survey.

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.

7. 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?

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 : 2×5=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?

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 : 5×5=25

31. Distinguish between population census and sample survey. 5

32. Mention the different methods of random sampling. Explain any one of them. 2+3=5

33. Prove that AM ≥ GM ≥ HM. 5

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

(Continued)

35. Give the classical definition of probability. Mention its properties. 2+3=5

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. 5

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

40. Show that Fisher's price index number satisfies both the time reversal test and the factor reversal test. 5

★★★