



**2020/TDC(CBCS)/ODD/SEM/
ECOSEC-301T/457**

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**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

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 as directed :

1×15=15

1. Define population from the statistical view-point.
2. Mention one method of collecting primary data.

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(Turn Over)

3. What is simple random sampling?
4. What is sampling error?
5. Write down any one essential of a good questionnaire.
6. Mention one merit of secondary data.
7. The sum of the deviations from mean is _____.
(Fill in the blank)
8. Mention one characteristic of a good average.
9. Extreme values have no effect on
 - (a) AM
 - (b) median
 - (c) GM
 - (d) HM
(Choose the correct option)

10. What is coefficient of variation?

11. Define skewness.

12. For a platykurtic curve, β_2 _____.
(Fill in the blank)

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(Continued)



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13. What is an 'event'?
14. Define random variable.
15. What is the chance of picking a spade from a pack of 52 cards?
16. Give one example of mutually exclusive events.
17. What is the meaning of a standard normal distribution?
18. What is p.m.f.?
19. What do you mean by the standard error of a statistic?
20. What is an interval estimation?
21. The difference between the expected value of an estimator and the value of the corresponding parameter is known as _____.
(Fill in the blank)
22. Define confidence interval.

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23. $\frac{1}{n-1} \sum (x - \bar{x})^2$ based on sample observations is an ____ estimator of population variance.
(Fill in the blank)
24. What does the property of 'consistency' of an estimator mean?
25. Index numbers are usually expressed in _____.
(Fill in the blank)
26. Define weighted index number.
27. What is quantity index number?
28. Fisher's index number is the ____ of Laspeyres' and Paasche's index numbers.
(Fill in the blank)
29. Write the formula of simple aggregative method.
30. Most frequently used index number formulae are
 - (a) weighted formulae
 - (b) unweighted formulae
 - (c) fixed weight formulae
 - (d) None of the above

(Choose the correct option)



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SECTION—B

Answer any *five* of the following questions :

2×5=10

- 31. What do you mean by sampling?
- 32. Name two sources of secondary data.
- 33. Name two absolute measures of dispersion.
- 34. How does skewness affect mean and mode?
- 35. Give any two limitations of classical approach to probability.
- 36. What is the shape of a normal curve?
- 37. Distinguish between parameter and statistic.
- 38. Differentiate between confidence limits and confidence level.
- 39. Mention any two problems involved in the construction of index numbers.
- 40. Why is Fisher's index called an ideal index number?

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SECTION—C

Answer any *five* questions

- 41. What are the advantages of sample survey method over census survey method? 5
 - 42. Discuss the merits and demerits of random sampling. 3+2=5
 - 43. Explain why standard deviation is regarded superior to other measures of dispersion. What is its chief defect? 4+1=5
 - 44. Find the coefficient of correlation from the following data : 5
- | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|
| X | 65 | 63 | 67 | 64 | 68 | 62 | 70 | 66 |
| Y | 68 | 66 | 68 | 65 | 69 | 66 | 68 | 65 |
- 45. State and explain the multiplicative law of probability. 5
 - 46. The mean of a binomial distribution is 6 and the standard deviation is given by $\sqrt{\frac{3}{2}}$. Find the distribution. 5
 - 47. Show that the sample mean based on a simple random sample with replacement (srswr) is an unbiased estimator of the population mean. 5



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48. Prove that the expectation of sample mean \bar{x} is the population mean and the variance of sample mean is $\frac{\sigma^2}{n}$, where σ^2 is the population variance and n is the sample size. 5
49. What is time-reversal test? Examine whether Laspeyres' and Paasche's indices satisfy this test. 1+2+2=5
50. Construct Fisher's ideal index number for the following data : 5

Commodity	1960 (Base Year)		1968 (Current Year)	
	Price	Qty.	Price	Qty.
A	8	6	12	5
B	10	5	11	6
C	7	8	8	5
