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TRIVANDRUM

Sixth Semester B.A. Degree Examination, April 2022

First Degree Programme under CBCSS

Economics

Core Course XIII

EC 1643 : BASIC TOOLS FOR ECONOMICS – II

(2014 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer in **one** or **two** sentences. Attempt **all** questions. **Each** question carries **1** mark.

1. Correlation.
2. Normal distribution.
3. Sample.
4. Random variable.
5. Least square method.
6. Karl Pearson's correlation coefficient
7. Random experiment and events
8. Central limit theorem

P.T.O.

9. Statistic.

10. Factor reversal test

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions not exceeding **one** paragraph. **Each** question carries **2** marks.

11. Discuss simple, partial and multiple correlation.

12. Distinguish between independent and dependent events.

13. Briefly explain important uses of regression analysis.

14. Distinguish between CPI and WPI.

15. State the salient features of Spearman's correlation coefficient.

16. What do you mean by mutually exclusive events?

17. Distinguish between unit test and time reversal test.

18. What do you mean by simple and compound events?

19. What is joint probability?

20. What is mathematical expectation?

21. What is regression line?

22. Distinguish between dependent variable and independent variable.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions not exceeding **120** words. **Each** question carries **4** marks.

23. A person is known to hit a target in 3 out of 4 shots whereas another person is known to hit the target in 2 out of 3 shots. Find the probability of the target being hit at all when they both try.

24. Explain the concept standard error.

25. If the probability of a defective bolt is 0.1, find (a) the mean and (b) the standard deviation for the distribution of defective bolts in a total of 400.

26. What are the different methods of constructing index numbers?

27. Find the coefficient of correlation between the variables X and V presented in the following table

X	1	3	4	6	8	9	11	14
Y	1	2	4	4	5	7	8	9

28. What are the assumptions of binomial distribution?

29. Describe the important uses of consumer price indices.

30. State the important conditions of normality.

31. On a final examination in economics, the mean was 72 and the standard deviation was 15. Determine the standard scores (i.e., grades I standard deviation units, z) of students receiving the grades (a) 60, (b) 93, (c) 72.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions not exceeding **four** pages. **Each** question carries **15** marks.

32. A ball is drawn at random from a box containing 6 red balls, 4 white balls, and 5 blue balls. Determine the probability that the ball drawn is (a) red, (b) white, (c) blue, (d) not red, and (e) red or white.

33. Consider the following schedule and find out the least squares' regression equation and values of estimates.

X	16	12	18	4	3	10	5	12
Y	87	88	89	68	78	80	75	83

34. What is binomial distribution? State its properties.

35. Construct index numbers of price form the following data by applying (a) Laspeyres Method, (b) Paasche's Method and (c) Bowley's Method.

Commodity	2018		2019	
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

(2 × 15 = 30 Marks)