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**Sixth Semester B.A. Degree Examination, April 2022**

**First Degree Programme under CBCSS**

**Economics**

**Core Course XIII**

**EC 1643 — BASIC TOOLS FOR ECONOMICS – II**

**(2018 Admission)**

Time : 3 Hours Max. Marks : 80

SECTION – I

Answer **all** questions. Answer in **one** or **two** sentences.

1. What is Scatter Diagram?
2. Define Bivariate data.
3. Describe the Weighted Aggregative Indices.
4. What is meant by Base shifting?
5. Define Index number.
6. Describe Complement of a Set.
7. Explain the term Combination.
8. Define Probability.
9. What is a Random Experiment?
10. What is meant by unimodal curve?

**(10 × 1 = 10 Marks)**

P.T.O.

## SECTION – II

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

11. Describe a Regression line.
12. Discuss the Properties of Correlation coefficient.
13. What is meant by probable error?
14. State the merits and demerits of Rank correlation.
15. What is the lead and lag correlation?
16. Discuss types of index numbers.
17. Examine the uses of Cost of Living index numbers.
18. What is meant by Deflating?
19. Distinguish between Sunset and Superset.
20. What is conditional probability?
21. What is the relative frequency theory of probability?
22. Define Mutually Exclusive Events.
23. What is expectation of a random variable?
24. When a card is drawn from a pack of cards, what is the probability of getting a King or Queen?
25. Give meaning and examples of Continuous Random variable.
26. Describe the mean and variance of Binomial distribution.

**(8 × 2 = 16 Marks)**

## SECTION – III

Answer any **six** of the following. **Each** answer should not exceed **120** words. Each question carries **4** marks.

27. Describe the significance of Regression analysis.

28. Calculate the Rank correlation between sales and Advertisement.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sales : | 90 | 85 | 68 | 75 | 82 | 80 | 95 | 70 |
| Advertisement : | 7 | 6 | 2 | 3 | 4 | 5 | 8 | 1 |

29. Explain the principle of least squares.

30. Compute fisher's Index from the following data.

| | Base Year | | Current Year | |
|---|---|---|---|---|
| Commodities | Price | Quantity | Price | Quantity |
| A | 4 | 3 | 6 | 2 |
| B | 5 | 4 | 6 | 4 |
| C | 7 | 2 | 9 | 2 |
| D | 2 | 3 | 1 | 5 |

31. What are the characteristics of index number? Explain.

32. Write a note on Statistical regularity.

33. A jar contains 3 red marbles, 7 green marbles and 10 white marbles. If a marble is drawn from the jar at random, what is the probability that this marble is white?

34. What are the general characteristics of poisson distribution?

35. What is standard normal variate?

36. The mark of a group of students is normally distributed with mean 50 and S.D 15. Estimate the percentage of students with mark below 35.

37. Discuss the nature of Probability distribution.

38. How does statistical tools are used in Economics?

**(6 × 4 = 24 Marks)**

## SECTION – IV

Answer any **two** of the following. Each answer should not exceed **4** pages. Each question carries **15** marks.

39. Fit a straight line by the principle of least squares to the following data.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| X : | 4 | 8 | 6 | 8 | 9 | 11 | 7 | 7 | 10 | 10 |
| Y : | 6 | 7 | 9 | 10 | 10 | 10 | 11 | 11 | 12 | 14 |

40. What are the characteristics of index numbers? And explain problems in the construction of numbers.

41. Describe the Quantity Index Numbers. Explain types and methods of Quantity Index Numbers.

42. State and explain the multiplication the theorem of probability with example.

43. Explain the Binomial Distribution? Give practical example in which B D is applied.

44. Discuss the usefulness of Normal distribution in Economic analysis.

**(2 × 15 = 30 Marks)**

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