(Pages : 4) **L – 1364**

Reg. No. : .....

Name : .....

Sixth Semester B.A. Degree Examination, March 2021

First Degree Programme Under CBCSS

Economics

Core Course XIII

EC 1643 : BASIC TOOLS FOR ECONOMICS — II

(2015 – 2017 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – I

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

1. Discrete variable
2. Slope
3. Dependent variable
4. Scatter diagram
5. Deflating
6. The least square principle
7. Random variable

P.T.O.

8. WPI

9. Weighted index numbers

10. Conditional probability.

(10 × 1 = 10 Marks)

SECTION – II

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

11. What is partial correlation?

12. What is addition theorem of probability?

13. Distinguish between independent and dependent events.

14. Write two merits of Weighted Average of Relative Indices.

15. Draw a Venn diagram showing intersection of two sets.

16. What are the uses of index numbers?

17. Write the Aggregate Expenditure Method constructing CPI.

18. What is random experiment?

19. Define sample space.

20. Family Budget Method of constructing CPI.

21. What is splicing?

22. What is base shifting?

(8 × 2 = 16 Marks)

SECTION – III

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

23. Explain Axiomatic approach to probability.

24. List out various tests of index numbers.

25. What are the properties of binomial distribution?

26. What is conditional probability.

27. What is axiomatic approach?

28. Construct Fisher's Ideal Index.

Commodity	Price (in Rs.)/Unit		No. of Units	
	Base Year	Current Year	Base Year	Current Year
A	40	60	50	60
B	80	100	25	40
C	75	70	40	50
D	120	200	60	70
E	180	250	75	70

29. Given the following information calculate the coefficients α and β for the regression equation $Y = \alpha + \beta X$ $\Sigma X = 372, \Sigma Y = 346, \Sigma XY = 13376, \Sigma X^2 = 14404$, $N = 10$.

30. In a normal distribution 10% of the items are under 50 and 90% are under 80. Find the mean and Standard Deviation of the distribution.

31. What is Karl Pearson's coefficient of Correlation?

(6 × 4 = 24 Marks)

SECTION – IV

Answer **any two** questions, not exceeding **4** pages. Each question carries **15** marks.

32. Discuss the problems in the construction of Index Numbers.

33. Explain Bays' Theorem with an example.

34. Calculate the Karl Pearson coefficient of correlation and show that change of scale does not affect the value of the correlation coefficient.

X	21	24	34	28	14	13	15	21	17	19
Y	45	40	37	44	56	50	43	35	40	29

35. A study is conducted involving 10 patients to investigate the relationship and effects of patient's age and their blood pressure. Calculating the linear regression of patient's age and blood pressure.

Age (X)	25	35	26	48	67	56	76	34	54	43
BP (Y)	120	122	118	130	135	136	140	125	132	122

(2 × 15 = 30 Marks)