QP CODE

C1001

Enrollment Number: ……

Name: ……

B.A DEGREE EXAMINATIONS, JULY 2025
Fourth Semester
B.A Economics
B21EC04DC – Statistics for Economics
(2023 January admissions)

Time: 3 Hours **Max Marks: 70**

Section A

Answer any ten of the following questions in a word or sentence each. Each question carries 1 mark.

1. What is meant by measures of Central tendency?
2. What do you mean by Scatter diagram?
3. Define Mean deviation.
4. What is the meaning of Regression?
5. List out two functions of National sample survey
6. Define Conditional probability.
7. What is Index numbers?
8. What is the meaning of line of regression of y on x?
9. Define mutually exclusive event.
10. What is Base shifting?
11. What is meant by Sampling frame?
12. Define multiple correlation.
13. What do you know about Coefficient of range?
14. How weighted arithmetic mean is calculated?
15. State the condition of factor reversal test

(1X10=10)

Section B

Answer any ten of the following questions in two or three sentences each. Each question carries 2 marks.

16. What is the difference between positional average and mathematical average?
17. Define the axiomatic approach of probability.
18. If a sample of size 22 items has a mean of 15 and another sample of size 18 items has a mean of 20, find the mean of the combined sample.

19. What are the mathematical properties of standard deviation?
20. How do you interpret the sign and magnitude of the coefficient of correlation?
21. What are the two key principles upon which the theory of sampling is based?
22. What is meant by bias in index numbers?
23. Define normal distribution. State its properties.
24. Find the quartile deviation for the following values:
    28,32,25,42,55,82,10,25,40,38,39
25. What are the two main types of random variables in probability?
26. Explain the main merits and demerits of rank correlation.
27. How do you construct consumer price index numbers?
28. Explain the method of least square.
29. Write down the features of simple random sampling.
30. What do you understand by equally likely events?

(2X10=20)

Section C

Answer any five of the following questions in a paragraph each. Each question carries 4 marks.

31. Explain the empirical approach to probability. How it differs from classical approach?
32. What is coefficient of variation? What are its uses?
33. From the following data of values of x and y, find the regression equation of y on x.

x	: 2	3	4	5	6
y	: 3	5	4	8	9

34. How are index numbers constructed? Explain the different methods used.
35. A bag contains 7 white and 9 black balls. 3 balls are drawn together. What is the probability that (1) all are black (2) all are white (3) 1 white and 2 black (4) 2 white and 1 black
36. Compute median

Class	:	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency:		8	12	20	23	18	7	2

37. Distinguish between correlation and regression analysis and indicate the utility of regression analysis in economic activities.
38. Give an example where harmonic mean is used as a measure of central tendency.
39. Discuss the benefits of sampling over census method of data collection.
40. Find Standard deviation of the given values 4,8,10,12,15,9,7,6,5,14

(4X5=20)

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Section D

Answer any two of the following questions in two pages each. Each question carries 10 marks.

41. Find out Arithmetic mean by direct method and step deviation method

Class	: 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency:	15	30	53	75	100	110	115	125

42. Discuss the various methods of studying correlation. What are the uses of correlation?
43. Calculate Weighted Index number by (1) Laspeyer's method (2) Paasche's method (3) Bowley-Dorbish method (4) Fisher's method and (5) Marshall Edgeworth method, from the data given below.

	Price		Quantity	
Commodity	Base year	Current year	Base year	Current year
A	4	7	10	8
B	5	9	8	6
C	6	8	15	12
D	2	2	5	6

44. Describe the main non-probability sampling techniques and examine their advantages and limitations.

(10X2=20)