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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)/
SPECIALIZATION IN CYBER SECURITY (CS)
EXAMINATION : DECEMBER - 2024/JANUARY-2025
SEMESTER - II
Sub: Statistics
(BCA – 240-18/BCA-240-20/BCA-CS-240-20/BCA-23-202/BCAC-23-202)

Date : 02/01/2025	Total Marks : 60	Time: 10.00 am To 12.30 pm
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Instructions:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labeled diagrams wherever necessary.

Q.1. Solve (Any 4)	(8)
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1. Define Class Width
2. State properties of coefficient of Regression
3. For a moderately skewed distribution, the mean and median are respectively 26.8 and 27.9. What is the mode of the distribution?
4. What are variables? State its types
5. Write the formula for covariance

Q.2. Solve (Any 3)	(9)
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1. State merits and demerits of Median
2. Define coefficient of variation. Write its formula
3. If the ratio of the mode to the median is 2: 3 for a dataset. Find the ratio of mode to mean.
4. The lifetime in days of 8 insects is given below: 15, 14, 28, 19, 26, 17, 15, 23 Find mean.

Q.3. Solve (Any 2)	(8)
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1. If the mode of the given data set 3, 4, 3, 5, 4, 6, 6 and x is 4. Find the value of x.
2. Write Formula for all types of Index Numbers
3. If the difference between the standard deviation and variance of a data is 12, then find the sum of the variance and standard deviation of that data

Q.4. Solve (Any 3)	(15)
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1. Find the variance of the numbers 3, 8, 6, 10, 12, 9, 11, 10, 12, 7.

2. Draw histogram and frequency polygon for the following data distribution

Class	Frequency
5-10	8
10-15	16
15-20	20
20-25	26
25-30	10
30-35	5

3. Marks obtained by 5 students in algebra and trigonometry as given below:

Algebra	16	15	12	10	8
Trigonometry	11	18	10	20	17

Calculate the Pearson correlation coefficient.

4. The following random sample gives the number of hours of study (X) for an examination and the grades Y obtained by 12 students. Find Regression coefficient

X	3	3	3	4	4	5	5	5	6	6	7	8
Y	45	60	55	60	75	70	80	75	90	80	75	85

Q.5. Solve. (Solve any 2)

(20)

1. Draw less than and more than Ogive curves for the following frequency distribution

Marks	No. of students
0-20	2
20-40	18
40-60	42
60-80	28
80-100	5

2. Find the mean mode and median of first 20 natural numbers
3. Find the mean deviation about the median for the data: 6, 7, 10, 12, 13, 4, 8, 12
