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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)(044)/
BACHELOR OF SCIENCE(COMPUTER APPLICATIONS)(750)/
BSC (DATA SCIENCE AND ARTIFICIAL INTELLIGENCE)(799)/
BACHELOR OF COMPUTER APPLICATIONS(DATA SCIENCE AND MACHINE
LEARNING)(786)/SPECIALIZATION IN CYBER SECURITY
(CS)(464)/BACHELOR OF SCIENCE (CYBER SECURITY)(760)
EXAMINATION MAY- 2026
SEMESTER - II
Sub: Statistics

(BCA240-20/BCA23-202/BSC24-202/79925-202/78625-202/BCA-CS-240-20/
 BCAC23-202/46425-202/76025-202/BSCC24-202)

Date : 28/05/2026

Total Marks : 60

Time : 10.00 am to 12.30 pm

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)

1. Find the standard deviation of 10,20,40,50,30.
2. The average temperature of 5 days in a week i.e. from Monday to Friday is 24. If the temperatures of Saturday and Sunday are 21 and 20 respectively, find the average temperature of the full week considering from Monday to Sunday.
3. Is it necessary to draw a histogram to find mode graphically? Explain.
4. Write down the merits of Arithmetic mean.
5. Mean and Median of the certain data are 100 and 94 respectively. Find the value of the Mode of the data.

(9)

Q.2. Solve (Any 3)

1. Calculate Paasche's Index Number for the following data:

Commodity	Year 2000		Year 2010	
	Quantity	Price	Quantity	Price
A	10	20	15	60
B	12	30	18	30
C	8	60	12	90
D	6	15	12	60

2. Explain the importance of tally marks in data collection. Write down the difference between Primary and secondary data.

3. The data given below is of which type? Inclusive or exclusive? If it is exclusive, how to convert it into inclusive type data?

Class	Frequency
10-19	15
22-29	50
30-35	10
39-49	5

4. Write down True or False:
- The algebraic signs of regression coefficients and Karl Pearson's correlation coefficient are always opposite to each other.
 - The value of coefficient of variation helps us to compare the consistency of the two data series.
 - The S.D. is not the measures of dispersion.

(8)

Q.3. Solve (Any 2)

1. The arithmetic mean of the data given below is 260. Find the missing frequency.

Class	Frequency
100-200	15
200-300	---
300-400	10
400-500	5

2. Find Mean and M.D. about mean for the following data: 12,13,11,15,19,21,20,24,15.
3. Construct a sub divided bar diagram for the following data

Day	Min. Temp	Max. Temp
Monday	18	22
Tuesday	15	25
Wednesday	18	32
Thursday	21	39
Friday	18	27

(15)

Q.4. Solve (Any 3)

- The means of two samples of sizes 10 and 20 are 24 and 45 respectively. Their standard deviations are 6 and 11 respectively. Obtain the standard deviation of sample of size 30 obtained by combining the two samples.
- Determine which of the two teams is more consistent?
Team A : Arithmetic Mean = 25 , S.D. = 6.
Team B : Arithmetic mean = 20 , S.D. = 4. Why?

Find Mode and Median of the data:

3.

Class	Frequency
10-20	3
20-30	7
30-40	10
40-50	7
50-60	3

Comment on the result.

4. Write down the importance of Measures of Dispersion over Measures of central tendencies. Explain its various measures with their utilities.

(20)

Q.5. Solve. (Solve any 2)

1. For the regression lines $2X + 3Y = 6$ and $5X + 7Y = 12$, Determine which of the two lines is of the type Y on X and which one is X on Y? Also find Arithmetic Mean of X and Arithmetic Mean of Y too.
2. Find the number of pairs in bivariate data, if the following data is given for the same:
 $r = -0.4, \sum x = 100, \sum x^2 = 2250, \sum y^2 = 2250$ & $\sum xy = 1900$
3. Calculate Mode graphically for the following data:

Marks	Number of Students
0-20	2
20-40	10
40-60	6
60-80	5
80-100	2