

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9 Sub. Code :

1	7	9	1	2
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Exam. Code :

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Bachelor of Computer Applications 1st Semester

(2124)

FUNDAMENTALS OF MATHEMATICAL STATISTICS

Paper : BCA-16-102

Time Allowed : Three Hours]

[Maximum Marks : 65

Note :— Attempt **FIVE** questions in all, selecting **ONE** question each from Units I, II, III and IV. Question No. **9** is compulsory. All questions carry equal marks. Log Tables and non-programmable calculators are allowed.

UNIT-I

1. (i) Find the simple and weighted arithmetic mean of the first 10 prime numbers, the weights being the corresponding numbers.
(ii) Write short note on collecting data from primary and secondary sources. 6+7=13
2. (i) Write short note on geometric and harmonic means with examples.
(ii) Write short note on grouped and ungrouped frequency distribution with examples. 6+7=13

UNIT-II

3. Find the Mean, Median, Mode and Range for the given data :
90, 94, 53, 68, 79, 94, 53, 65, 87, 90, 70, 69, 65, 89, 85, 53,
47, 61, 27, 80. $4+4+5=13$
4. (i) Discuss formulas of Standard Deviation and Coefficient of Variation.
- (ii) Discuss using examples for discrete series and continuous series. $6+7=13$

UNIT-III

5. (i) Calculate Karl Pearson's coefficient of correlation (using any technique) for :

x	10	20	30	40	50	60	70
y	8	6	14	16	10	20	24

- (ii) Discuss correlation with example. $9+4=13$
6. (i) Calculate Spearman's coefficient of correlation (assume ranks are given) for :

x	9	24	12	23	19	16
y	9	22	20	14	22	18

- (ii) Write short note on types of measuring correlation.

$$9+4=13$$

UNIT-IV

7. (i) Differentiate between correlation and regression.
(ii) Discuss any one method of obtaining regression analysis using example.
(iii) What is linear regression ? $4+5+4=13$
8. (i) Discuss use and limitations of regression analysis.
(ii) How linear regression is different from non-linear regression ?
(iii) What is standard error of estimate in regression analysis ? $6+4+3=13$

(Compulsory Question)

9. (i) Give example to differentiate between arithmetic and geometric mean.
(ii) Define Quintiles and Percentiles.
(iii) Differentiate between scatter and graphic methods in technique for measuring correlation.
(iv) What are simple, multiple and partial regression analysis ? $3+3+3+4=13$