Total No. of Printed Pages:3

SUBJECT CODE NO:- C-3045
FACULTY OF COMMERCE AND MANAGEMENT
B. Com F.Y (Sem-I)
Examination November/December- 2022
Business Mathematics & Statistics-I

[Time: 3:00 Hours] **[Max. Marks: 80]**

Please check whether you have got the right question paper.

N.B
1. Questions No.1 is compulsory.
2. Solve any 4 questions from question 2 to 7
3. Use of log table and calculator is allowed.

Q.1 A. Select the most appropriate answer the alternatives given below (one mark each): 05

1. The mid values of the class be calculated with the help of _____
   a. M.V=$\frac{L_1+L_2}{2}$ b. M.V=$\frac{L_1\times L_2}{2}$ c. M.V= $(\frac{L_1}{2}\times 2)$ d. M.V = $\frac{L_1-L_2}{2}$
2. Data collected on religion from the census reports are _____
   a. Primary data b. Secondary data c. Sample data d. A and B
3. C. V. is calculated by _____.
   a. (σ^2) b. $\frac{S.D.}{100}$ c. $\frac{S.D.}{MEan}$ d. none of these
4. If every element of a Matrix is zero, it is called a _____ matrix.
   a. Unit b. Zero or null c. equal d. roe
5. Karl Pearson's coefficient of skewness (SK)= $\frac{MEan-}{S.D}$ ___
   a. Mode b. Variation c. median d. S.D

B. Answer the following questions in one sentence each (one mark each)'' 05
1. What is primary data?
2. What is mean by skewness lies between $\pm$ 1?
3. Which are the main measures of central Tendency.
4. What is ROW matrix?
5. Define second order determinant

C. Fill in the blanks and rewrite the sentences (one mark each) 05
1. Interview is _____ data.
2. When the mean and the mode of a given distribution are equal than its coefficient of skewness is _____

3. Two matrices can be added or subtracted if their _____are same.
4. In a third order determinant row and columns are _____
5. Median is _____

D. State Whether the following statements are true or false

1. Secondary data should not be accepted at its face value. 05
2. For any symmetrical distribution men-mode=3(Mean-median)
3. Statistics does not help in prediction about future
4. In a square matrix No. of Rows = No. of Columns
5. $D = \begin{vmatrix} a & b \\ c & d \end{vmatrix}$ Then its value is ad-bc

Q.2 Find out mean, median and mode from the following data: 15

Class	Frequency
0-4	7
4-8	10
8-12	12
12-16	15
16-20	21
20-24	15
24-28	11
28-32	9

Q.3 Calculate standard deviation and it's co-efficient of the following series. 15

Marks is Hindi (out of 100)	No. of Students
0-10	12
10-20	8
20-30	6
30-40	4
40-50	5
50-60	10
60-70	30
70-80	15
80-90	10

Q.4 Evaluate the following determinants 15

$$\begin{vmatrix} 1 & 2 & 3 \\ 12 & 13 & 14 \\ 33 & 34 & 35 \end{vmatrix}$$

Q.5 Find 3A-2B+C, if $A = \begin{vmatrix} 1 & 4 & 2 \\ 2 & 4 & 3 \end{vmatrix}$; $B = \begin{vmatrix} 1 & 4 & 0 \\ 7 & -2 & 3 \end{vmatrix}$ and $C = \begin{vmatrix} 4 & 0 & 5 \\ 7 & 1 & 2 \end{vmatrix}$ 15

Q.6 Calculate the Karl Pearson's co-efficient of skewness from the following data. 15

Wages in Rs.	No. of Workers
100-200	4
200-300	7
300-400	9
400-500	18
500-600	15
600-700	10
700-800	5
800-900	2

Q.7 Write short notes (any three) 15

a) Importance of statistics
b) Types of matrices
c) Objectives of measuring Dispersion
d) Properties of Determinants
e) Primary Data