Total No. of Printed Pages:3

SUBJECT CODE NO:- CC-3382
FACULTY OF COMMERCE AND MANAGEMENT
B.Com F.Y (Sem-I) (CBCGS) Examination Oct/Nov 2019
Business Mathematics & Statistics-I

[Time : Three Hours] **[Total Marks :80]**

Please check whether you have got the right question paper.

N.B. :
1. Question No. 1 is compulsory.
2. Solve any 4 questions from Questions No. 2 to 7.

Q.1 A) Select the most appropriate answer. 05

1. If a data is obtained through some source, then it is called as _____.
   a) Secondary data b) Primary data
   c) Population data d) Sampling data

2. $\left[\frac{Standard\ Deviation}{Mean} \times 100\right]$ is called _____.
   a) Skewness b) Dispersion
   c) Co-efficient of Variation d) None of the above

3. Value of $\begin{vmatrix} 5 & 2 \\ 6 & 5 \end{vmatrix}$ is _____.
   a) 25 b) 12 c) 10 d) 13

4. If A= $\begin{bmatrix} 1 & 2 \\ 3 & 5 \end{bmatrix}$ and B = $\begin{bmatrix} 4 & 2 \\ 1 & 6 \end{bmatrix}$ then A + B is _____.
   a) $\begin{bmatrix} 5 & 4 \\ 4 & 11 \end{bmatrix}$ b) $\begin{bmatrix} 4 & 11 \\ 5 & 4 \end{bmatrix}$ c) $\begin{bmatrix} 4 & 5 \\ 4 & 11 \end{bmatrix}$ d) $\begin{bmatrix} 4 & 5 \\ 11 & 4 \end{bmatrix}$

5. Median of 2, 4, 5, 6, 7, 8 and 11 is _____.
   a) 06 b) 12 c) 11 d) 04

B) Answer in one sentence. 05

1. Define Arithmetic mean.
2. What is Mid – value?
3. What is square matrix?
4. What is mean by determinant of third order?
5. Give the meaning of statistics.

1946F4871E812648663F3486FE502F0A

C) Fill in the blanks and rewrite the sentence. 05

1. Observation is a method of collecting _____ data.
2. Matrix in which all elements are zero is called _____.
3. When a series is not symmetrical, it is said to be _____.
4. Variation of the variable about a central value is known as _____.
5. Mean is a measure of _____.

D) State whether the following statement are True or False. 05

1. Primary data is original in character.
2. A= $\begin{bmatrix} 1 & 0 & 0 \\ 4 & 2 & 0 \\ 5 & 6 & 3 \end{bmatrix}$ is upper triangular matrix.
3. The value of a determinant remain unchanged, if it is rows and columns are interchange.
4. In a symmetrical distribution, Mean, Median and mode are equal.
5. Variance is the square of Standard Deviation.

Q.2 Compute Mean, Median and Mode from the following data. 15

Age	No. of Persons
0-5	4
5-10	13
10-15	17
15-20	20
20-25	26
25-30	32
30-35	27
35-40	11
40-45	7
45-50	3

Q.3 Calculate the Standard Deviation and it's co-efficient from the following data. 15

Wages	No. of Workers
0-50	10
50-100	15
100-150	22
150-200	45
200-250	30
250-300	23
300-350	5

1946F4871E812648663F3486FE502F0A

Q.4 Calculate Karl Pearson's Co-efficient of Skewness from the following data. 15

Marks	**No. Of Students**
10-20	8
20-30	10
30-40	13
40-50	20
50-60	15
60-70	12
70-80	10
80-90	9

Q.5 Evaluate the Determinant by using Expansion Method. 15

$$\begin{vmatrix} 1 & 2 & 3 \\ -7 & 8 & 9 \\ 4 & 6 & 5 \end{vmatrix}$$

Q.6 If A = $\begin{bmatrix} 11 & -12 & 14 \\ 9 & 8 & 7 \\ 1 & 2 & 3 \end{bmatrix}$ and B = $\begin{bmatrix} 4 & 5 & 6 \\ 15 & 10 & 8 \\ 7 & 9 & -12 \end{bmatrix}$ 15

Find the matrix of

1) 3A + 5B 2) 4A – 2B

Q.7 Write short notes (Any Three) 15

1. Limitation of Statistics.
2. Sources of collecting Secondary data.
3. Types of Averages.
4. Objectives of Skewness.
5. Properties of addition and subtractions.

1946F4871E812648663F3486FE502F0A