

## Bachelor of Commerce (B.Com.) Semester—II (CBCS) Examination

## STATISTICS AND BUSINESS MATHEMATICS

## (Compulsory)

Time : Three Hours]

[Maximum Marks : 80

**N.B.** :— (1) All questions are compulsory.

(2) All questions carry equal marks.

1. (a) Explain functions and limitations of statistics. 8

(b) Calculate the Geometric Mean for the following items :

Items — 15, 18, 21, 25, 29, 43, 48, 37, 33, 24. 8

**OR**

(c) The following is the frequency distribution of the marks obtained by 251 students in an examination :

Marks obtained	0–10	10–20	20–30	30–40	40–50	50–60	60–70	70–80
No. of students	15	20	25	24	12	31	72	52

Compute mean, median and mode. 16

2. (a) Define the term Dispersion. Explain its significance. 8

(b) Calculate Mean Deviation from mean and median of the following distribution :

Items — 10, 15, 18, 20, 20, 22, 23, 25, 27, 30. 8

**OR**

(c) Find out the Standard deviation and coefficient of variation for the following series :—

Wages (in Rs.)	40–50	50–60	60–70	70–80	80–90	90–100	100–110	110–120
No. of persons	11	23	40	60	35	16	09	06

16

3. (a) Calculate coefficient of skewness with the help of mean, mode and S.D. for the following data :

Marks — 10, 12, 14, 15, 18, 19, 20, 17, 15, 13. 8

(b) Calculate Bowley's coefficient of skewness from the following data :

Item	6	7	8	9	10	11	12
f	3	6	9	13	8	5	4

8

**OR**

- (c) The following table gives the distribution of population in a town in different age groups. Calculate Karl Pearson's coefficient of skewness :

Age groups	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Population in 000	10	12	24	32	29	11	03	01

16

4. (a) Two numbers are in the ratio of 4 : 7. If 12 be added to each, they are in the ratio of 7 : 10. Find the numbers. 8
- (b) A man had a certain sum of money. He gave 20% of it to his eldest Son, 30% of the remaining to his younger son and 10% of the remaining for poor boys in a school. Still he has Rs. 10,080 with him. Find his total sum. 8

**OR**

- (c) Find out the compound Interest on Rs. 12,000 @ 8% annually for 2 years assuming the interest is calculated quarterly. 8
- (d) A shopkeeper sold the following items during the year :

	Items Sold	Cost per unit (Rs.)	Selling Price Per unit (Rs.)
A	100	9	11
B	500	8	10
C	300	10	15
D	200	15	18

Find the percentage of Profit on cost. 8

5. (a) Calculate Harmonic Mean :  
Size = 540, 6570, 13, 150, 6, 250, 7500, 3000 4
- (b) Find out C.V. :  
S.D. = 3.5, n = 10,  $\Sigma m = 145$  4
- (c) Find out coefficient of skewness. If difference of two quartiles is 14, and sum of the two quartiles is 42 and median is 18. 4
- (d) What will be the simple interest on Rs. 10,000 for  $3\frac{1}{2}$  years at the rate of  $5\frac{1}{2}\%$  per annum ? 4

## Bachelor of Commerce (B.Com.) Semester—II (CBCS) Examination

## STATISTICS AND BUSINESS MATHEMATICS

## (Compulsory)

Time : Three Hours]

[Maximum Marks : 80

N.B. :— (1) All questions are compulsory.

(2) All questions carry equal marks.

## (मराठी माध्यम)

1. (अ) सांख्यिकीचे कार्य आणि मर्यादा स्पष्ट करा. 8
- (ब) इंग्रजी माध्यमानुसार. 8
- किंवा
- (क) इंग्रजी माध्यमानुसार. 16
2. (अ) अपकिरण या संज्ञेची व्याख्या द्या. त्याचे महत्व स्पष्ट करा. 8
- (ब) इंग्रजी माध्यमानुसार. 8
- किंवा
- (क) इंग्रजी माध्यमानुसार. 16
- प्रश्न क्र. 3, 4, 5 इंग्रजी माध्यमानुसार.

## Bachelor of Commerce (B.Com.) Semester—II (CBCS) Examination

## STATISTICS AND BUSINESS MATHEMATICS

## (Compulsory)

Time : Three Hours]

[Maximum Marks : 80

**N.B. :**— (1) All questions are compulsory.

(2) All questions carry equal marks.

## (हिन्दी माध्यम)

1. (अ) सांख्यिकी के कार्य एवम् मर्यादाएँ स्पष्ट कीजिये। 8
- (ब) अंग्रेजी माध्यम के अनुसार। 8
- अथवा
- (क) अंग्रेजी माध्यम के अनुसार। 16
2. (अ) अपकिरण (Dispersion) इस संज्ञा की परिभाषा दीजिये उसका महत्व स्पष्ट कीजिये। 8
- (ब) अंग्रेजी माध्यम के अनुसार। 8
- अथवा
- (क) अंग्रेजी माध्यम के अनुसार। 16
- प्रश्न क्र. 3, 4 एवम् 5 अंग्रेजी माध्यम के अनुसार।