Bachelor of Commerce (B.Com.) Semester-II Examination

STATISTICS AND BUSINESS MATHEMATICS

Compulsory Paper—1

Time : Three Hours]   [Maximum Marks : 80

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

(2) All questions carry equal marks.

1. (a) Explain importance and limitations of Statistics.   8

(b) Find out Geometric Mean from given data :

Income	No. of Persons
500	05
600	10
50	12
5	13
625	02
900	09
1000	15
2000	02

8

OR

(c) Calculate Mean, Median and Mode from the following series :

Profit (Rs.)	No. of Shopkeepers
Below 30	6
Below 40	18
Below 50	32
Below 60	54
Below 70	74
Below 80	120
Below 90	128
Below 100	138

16

2. (a) What is Standard Deviation ? Explain merits and demerits of Standard Deviation.   8

(b) Find out Mean Deviation and its co-efficient from Mean of the following information :

Sr. No.	1	2	3	4	5	6	7	8
Marks	10	12	13	17	19	23	25	27

8

OR

(c) Find out co-efficient of variation from the following information :

Income	Frequency
More than 100	1000
More than 200	900
More than 300	850
More than 400	700
More than 500	600
More than 600	400
More than 700	200
More than 800	110
More than 900	50

16

3. (a) Calculate the co-efficient of Skewness by Karl Pearson's formula for the following series :

Size : 7   9   12   10   18   12   16   17   12   12   8

(b) Given data :

Mean : 40.40, Median = 50.70, Standard Deviation = 18.80, Upper Quartile = 22.80 and Lower Quartile = 20.20

Calculate :

(A) Karl Pearson's co-efficient of Skewness

(B) Bowley's co-efficient of Skewness.   8

OR

(c) Find out the co-efficient of Skewness by Karl Pearson's from the following data :

Marks	No. of Students
Less than 10	10
Less than 20	23
Less than 30	38
Less than 40	56
Less than 50	77
Less than 60	97
Less than 70	113
Less than 80	130

16

4. (a) Rs. 4,800 are distributed among A, B and C in the ratio of 6 : 5 : 4.

Find out :

(1) The difference in the share of A and B

(2) The difference in the share of A and C

(3) The difference in the share of B and C.   8

(b) An army lost of its men in war 10% of the remaining died due to disease and 10% of the rest declared disabled. Thus the strength of the army was reduced to 7,29,000 active men. Find out the original strength of the army. 8

OR

(c) Find the difference between the simple and compound interests on Rs. 4,000 at 10% p.a. for 2 years. 8

(d) Mr. Raman Rao sold five flats at the following price :

Ground floor sold Rs. 35,00,000 @ 12% gained

First floor sold Rs. 32,00,000 @ 10% gained

Second floor sold Rs. 3,00,000 @ 8% gained

Third floor sold Rs. 28,00,000 @ 4% loss

Fourth floor sold Rs. 25,00,000 @ 6% loss

Find out profit or loss and percentage of profit or loss on sale price. 8

5. (a) Find out Harmonic Mean :

Size of items

3,000

7,500

250

6

150

13

6,750

540 4

(b) Find out upper quartile from the following series :

Sr. No.	1	2	3	4	5	6	7	
Income	104	110	114	117	125	232	240	4

(c) Compute co-efficient of Skewness from the following data :

$m = 18.8$, $Q_1 = 14.6$, $Q_3 = 25.2$ 4

(d) The population of a village decreased from 1500 to 1200 during the period of 5 years. Find out the percentage of decrease. 4

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(मराठी माध्यम)

1. (अ) सांख्यिकीचे महत्व आणि मर्यादा स्पष्ट करा.   8

(ब) इंग्रजी माध्यमानुसार.   8

किंवा

(क) इंग्रजी माध्यमानुसार.   16

2. (अ) प्रमाप विचलन म्हणजे काय ? प्रमाप विचलनाचे गुण-दोष स्पष्ट करा.   8

(ब) इंग्रजी माध्यमानुसार.   8

किंवा

(क) इंग्रजी माध्यमानुसार.   16

प्रश्न क्रमांक **3, 4** आणि **5** इंग्रजी माध्यमानुसार

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(हिन्दी माध्यम)

1. (अ) सांख्यिकी के महत्व एवं सीमाएं विशद कीजिये।   8

(ब) अंग्रेजी माध्यम के अनुसार।   8

अथवा

(क) अंग्रेजी माध्यम के अनुसार।   16

2. (अ) प्रमाप विचलन याने क्या ? प्रमाप विचलन के गुण-दोष स्पष्ट कीजिये।   8

(ब) अंग्रेजी माध्यम के अनुसार।   8

अथवा

(क) अंग्रेजी माध्यम के अनुसार।   16

प्रश्न क्रमांक **3, 4** और **5** अंग्रेजी माध्यम के अनुसार।