

Bachelor of Commerce (B.Com.) Semester–II 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) What is Statistics ? Explain its functions. 8
 (b) Find out Geometric Mean and Harmonic Mean :

| Marks | No. of Students | |
|-------|-----------------|---|
| 20–30 | 5 | |
| 30–40 | 13 | |
| 40–50 | 7 | |
| 50–60 | 11 | |
| 60–70 | 4 | 8 |

OR

- (c) Find out Mean, Median and Mode from the following details :—

| Marks | No. of Students | |
|---------|-----------------|----|
| upto 10 | 02 | |
| upto 20 | 20 | |
| upto 30 | 50 | |
| upto 40 | 95 | |
| upto 50 | 130 | |
| upto 60 | 150 | |
| upto 70 | 156 | |
| upto 80 | 160 | 16 |

2. (a) Define dispersion and discuss the significance of dispersion. 8
 (b) Calculate Mean deviation from the Median :

| | | | | | | | |
|------------|----|----|----|----|----|----|---|
| X : | 10 | 15 | 20 | 30 | 40 | 50 | |
| f : | 8 | 12 | 15 | 10 | 03 | 02 | 8 |

OR

- (c) Calculate coefficient of variation from the following information :—

| Temp. in °C | No. of days | |
|--------------|-------------|----|
| – 40 to – 30 | 10 | |
| – 30 to – 20 | 28 | |
| – 20 to – 10 | 30 | |
| – 10 to 0 | 40 | |
| 0 to 10 | 65 | |
| 10 to 20 | 180 | |
| 20 to 30 | 10 | 16 |

3. (a) Find out Bowley's coefficient of skewness
- | | | | | | | | |
|---------------|----|----|----|----|----|----|---|
| Size : | 10 | 11 | 12 | 13 | 14 | 15 | |
| f : | 2 | 4 | 10 | 8 | 6 | 2 | 8 |
- (b) Find out Bowley's coefficient of skewness :
- Income (in Rs.)** : 100, 120, 150, 140, 180, 175, 189 8

OR

- (c) Calculate Karl Pearson's coefficient of skewness :

| Daily Income (Rs.) | No. of Persons | |
|--------------------|----------------|----|
| More than 10 | 100 | |
| More than 20 | 97 | |
| More than 30 | 90 | |
| More than 40 | 70 | |
| More than 50 | 40 | |
| More than 60 | 25 | |
| More than 70 | 15 | |
| More than 80 | 8 | |
| More than 90 | 3 | 16 |

4. (a) Find the compound interest for 2 years on Rs. 14,000 @ 10% P.A. if :
- (i) The interest is payable annually
- (ii) The interest is payable half yearly. 8
- (b) On a certain commodity a manufacturer takes 20% profit, a wholesaler 25% profit and a Retailer 40% profit. If a consumer purchased the article for Rs. 700, find out its manufacturing cost. 8

OR

- (c) A house owner increased the rent of his house by 15% and after some days reduced at the rate of 15%. How much less or more rent is being paid by the tenant now than the original Rent ? 8
- (d) The total salary of two employees is Rs. 10,350, the proportion of their salary is 7 : 8. Find the salary of each employee. What reduction should be made in their salary so that the proportion becomes 5 : 6 ? 8
5. (a) Make a frequency distribution with intervals of 10 from the following data (beginning from 30) :—
- 85, 66, 69, 40, 64, 59, 43, 84, 82, 92
- 63, 56, 72, 41, 44, 34, 85, 90, 68, 65
- 45, 83, 55, 53, 57, 79, 63, 81, 90, 71
- 80, 73, 74, 39, 36, 43, 57, 95, 93, 88 4
- (b) Find out Standard Deviation —
- $n = 230, \Sigma fdx^2 = 758, \Sigma fdx = 125, i = 10$ 4
- (c) Find out skewness —
- Mean = 50, Median = 51, Mode = 53, S.D. 4.68 4
- (d) Find the compound interest of Rs. 1,200 at the rate of 12% P.A. for two years, if the interest is paid quarterly. 4

Bachelor of Commerce (B.Com.) Semester-II 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) सांख्यिकी म्हणजे काय ? त्याची कार्ये स्पष्ट करा. | 8 |
| | (ब) इंग्रजी माध्यमानुसार. | 8 |
| किंवा | | |
| | (क) इंग्रजी माध्यमानुसार. | 16 |
| 2. | (अ) अपकिरणाची व्याख्या द्या आणि अपकिरणाचे महत्व स्पष्ट करा. | 8 |
| | (ब) इंग्रजी माध्यमानुसार. | 8 |
| किंवा | | |
| | (क) इंग्रजी माध्यमानुसार. | 16 |
| प्रश्न क्रमांक 3, 4 आणि 5 इंग्रजी माध्यमानुसार. | | |

Bachelor of Commerce (B.Com.) Semester-II 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 का अर्थ क्या है ? उसके कार्य स्पष्ट कीजिए। 8
 (ब) अंग्रेजी माध्यम के अनुसार। 8

अथवा

- (क) अंग्रेजी माध्यम के अनुसार। 16
 2. (अ) अपकिरण की व्याख्या दीजिये एवं अपकिरण का महत्व स्पष्ट कीजिए। 8
 (ब) अंग्रेजी माध्यम के अनुसार। 8

अथवा

- (क) अंग्रेजी माध्यम के अनुसार। 16

प्रश्न क्रमांक 3, 4 एवम् 5 अंग्रेजी माध्यम के अनुसार।