

2008000203060001
EXAMINATION NOVEMBER 2024
BACHELOR OF COMMERCE (HONORS)
(THIRD SEMESTER)
BUSINESS STATISTICS - I

[Time: As Per Schedule]

[Max. Marks : 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMMERCE (HONORS) (THIRD SEMESTER)**
 - b. Name of the Subject : **BUSINESS STATISTICS - I**
 - c. Subject Code No : **2008000203060001**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.
 5. Simple calculator can be used.

Seat No:

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Student's Signature

Q.1 (a) What is Primary and secondary data? How will you collect both data? **5**

(b) What is definition of Statistics? Discuss various applications of statistics in different fields. **5**

Q.2 (a) What are different components of a time series? Describe each of them. and state the measure of trends. **5**

(b) Fit a straight-line trend by the method of least squares to the following data. **5**

Predict sale of the year 2023

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Sale | 38 | 40 | 65 | 72 | 69 | 60 | 87 | 95 |

(c) Compute the 4 yearly moving averages from the following data. **5**

| | | | | | | | | |
|-------|------|------|------|------|------|------|------|------|
| Year | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| Sales | 36 | 43 | 43 | 34 | 44 | 54 | 34 | 24 |

Q.3 (a) Calculate Mean, Median and Mode from the following data. **6**

| | | | | | | | | |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Age | 55-60 | 50-55 | 45-50 | 40-45 | 35-40 | 30-35 | 25-30 | 20-25 |
| No. of people | 7 | 13 | 15 | 20 | 30 | 33 | 28 | 14 |

(b) Find the Standard deviation from the following data. **4**

| | | | | | | | |
|------------------|----|----|----|----|----|----|----|
| Size of the item | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Frequency | 2 | 7 | 11 | 15 | 10 | 4 | 1 |

(c) Find the first four moments for the set of the number 2,4,6,8 **3**

Q.4 (a) Explain - (1) Mutually Exclusive Events **2**
(2) Events

(b) What is the probability that a leap year, selected at random, will have 53 Sundays? **4**

(c) A has 3 shares in a lottery containing 3 prizes and 9 blanks; B has 2 shares in a lottery, containing 2 prizes and 6 blanks. Compare their chances of winning. **4**

(d) A card is drawn from a pack of 52 cards and then a second card is drawn. **2**
What is the probability that both the cards drawn are queen?
