

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

BTTM (Sem.-4)
INTRODUCTION TO STATISTICS

Subject Code : BTTM-401-18

M.Code : 77518

Date of Examination: 11-12-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Write briefly:**

- Discuss the importance of Statistics
- What are the causes of distrust of Statistics?
- Define the Rounding off data. What precautions should be followed Rounding of the data?
- How to convert Exclusive series into Inclusive Series?
- What are the different types of the bar diagrams?
- What are index numbers? What are its uses?
- What do you mean by time series? How it is useful in business studies?
- Explain the Coefficient of variation.
- Measures of Skewness
- Difference between Mean deviation and Standard Deviation

SECTION-B

- "Statistics is a body of methods of for making wise decisions on the face of uncertainty". Comment on the statement bringing clearly how does statistics help in business decision making?
- Distinguish between Primary and secondary data
- The Mean monthly salary paid to all workers in a firm was Rs 310. The number of male workers was twice the number of female workers. If the mean salary of male workers was Rs 350. Find the mean salary of female workers?
- The first and the third quartiles of the following data are given to be 25 marks and 50 marks respectively.

Marks:	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	Total
Frequency:	4	8	?	19	?	10	5	?	72

- What do you understand by Time Series analysis? Write all its components?

SECTION-C

- Given the following data on sales and purchase :

Sales	91	97	108	121	67	124	51	73	111	57
Purchase	71	75	69	97	70	91	39	61	80	42

Obtain the regression equations Y on X; X on Y, Coefficient of Correlation and Estimate Y when X is 88 and X when Y is 56.

- Calculate the Standard Deviation and coefficient of Variation from the given data

Mid Value	5	15	25	35	45	55	65
f:	4	8	11	15	19	6	3

- Fit a linear trend for the following data on annual seed production (in million tons) in a state :

Year	1995	1996	1997	1998	1999	2000	2001	2002
Production	23	25	50	45	60	75	84	100

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.

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BTTM (Sem.-4)
INTRODUCTION TO STATISTICS
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SECTION - A

1. Write briefly :

- a. Frequency
- b. Normal Distribution
- c. Inter-quartile range
- d. Standard deviation
- e. Skewness
- f. Population
- g. Statistical error
- h. Tabulation
- i. Histogram
- j. Percentile

SECTION - B

2. Explain the concept of statistics. What is its significance?
3. What are the properties of arithmetic mean? Explain its merits and demerits.
4. Explain the difference between mean deviation and standard deviation.
5. Calculate the correlation coefficient for the following heights (in inches) of fathers (X) and sons (Y) :

X	65	66	67	67	68	69	70	72
Y	67	68	65	68	72	72	69	71

6. Calculate trend values using 4-yearly moving average for the time series below :

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Demand	80	84	80	88	98	92	84	88	80	100

SECTION - C

7. What do you mean by time series analysis? What are its trends and components? Elaborate.
8. Calculate the arithmetic mean and standard deviation using the following table :

Class Interval	130-134	135-139	140-144	145-149	150-154	155-159	160-164
Frequency	3	12	21	28	19	12	5

9. Explain the difference between mathematical and positional averages. Support your answer with examples.

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