

St. Claret College

Autonomous, Bengaluru

UG END SEMESTER EXAMINATION-MAY 2025

BBA - II SEMESTER

BM 2424: DATA ANALYSIS FOR BUSINESS DECISIONS

12

TIME: 3 hours

MAX. MARKS: 80

This paper contains FOUR printed pages and FOUR parts

Instructions:

1. Verify and ensure that the question paper is completely printed.
2. Any discrepancies or questions about the exam paper must be reported to the COE within 1 hour after the examination.
3. Students must check the course title and course code before answering the questions.

PART-A

Answer ALL questions. Each answer carries ONE mark.

[10 x 1 = 10]

1. The value which appears very frequently in a data is called _____.
a. Mean b. Median c. Mode d. Standard Deviation
2. Which of the following is not a measure of central tendency?
a. Standard Deviation b. Mean c. Median d. Mode
3. In the class intervals 10 – 20, 20 – 30, 20 is included in which interval?
a. 10 – 20 b. 20 – 30 c. Both the intervals d. None of the intervals
4. The co-efficient of variation is a percentage expression for _____.
a. Standard variation b. Quartile deviation
c. Mean deviation d. None of the above
5. The numerical value of a standard deviation can never be _____.
a. Negative b. Zero c. Larger than the variance d. None of the above
6. Which measure of dispersion is appropriate to compare the two different series?
a. Co-efficient of variation b. Mean Deviation
c. Variance d. Standard Deviation



7. An orderly set of data arranged in accordance with their time of occurrence is called:
a. Arithmetic series b. Harmonic series c. Geometric series d. Time series
8. If the values of 2 variables move in the same direction
a. The correlation is said to be non-linear b. The correlation is said to be linear
c. The correlation is said to be negative d. The correlation is said to be positive
9. The probability of event equal to zero is called:
a. Unsure event b. Sure event c. Impossible event d. Independent event
10. A bag has 3 red balls and 5 green balls. If we take a ball from the bags then what is the probability of getting red balls only?
a. 3 b. 8 c. $\frac{3}{8}$ d. $\frac{8}{3}$

PART-B

Answer any **THREE** questions. Each answer carries **EIGHT** marks.

[3 x 8 = 24]

11. Calculate median for the following data.

Wages(X)	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50
frequency	5	7	9	15	12	10	9	8	4	2

12. Following information relates to two batsman A and B

	Batsman 'A'	Batsman 'B'
No. of innings played	10	10
Average runs scored per innings	45.5	52.5
Standard Deviation	10	11

- a) Who is better run getter? b) Who is the consistent batsman?
13. From a pack of 52 cards, one card is drawn at random. What is the probability that it will be a i) King card (ii) Red card (iii) Spade card (iv) King of heart
14. Fit a trend by semi-average method of the following data:

Year	2017	2018	2019	2020	2021	2022	2023
Production	102	105	114	110	108	116	112

15. Find out the co-efficient of rank correlation between X and Y:

X	10	12	18	24	23	27
Y	13	18	12	25	30	10

PART-C

Answer any THREE questions. Each answer carries TWELVE marks

[3 x 12 =36]

16. Find mean, median and mode from the following data:

Annual Salary (In lakhs)	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
No. of employees	5	10	10	30	15	10	18	10	2

17. Find out Karl Pearson's Co-efficient of Correlation and Probable Error from the following data of marks obtained by Ten students in a class test.

Marks in Economics	45	70	65	30	90	40	50	75	85	60
Marks in Statistics	35	90	70	40	95	40	60	80	80	50

18. The following figures relate to advertising expenditure and sales.

Advertisement expenses (in lakhs)	60	62	65	70	73	75	71
Sales (in crores)	10	11	13	15	16	19	14

- Obtain the two regression equations.
- Estimate the Sales for advertising expenditure of Rs. 90 lakhs
- Estimate the Advertising expenditure for a sales target of Rs. 25 crores.

19. Following are the runs scored by the two batsman named RAHUL and KOHLI in ten innings. Find who the better run scorer is and who is more consistent?

RAHUL	100	20	10	30	80	45	10	15	65	15
KOHLI	90	10	40	90	15	10	85	10	55	20

Compute Standard Deviation and Co-efficient of Variance (CV)

20. Production figures of a textile industry are as follows:

Year	2017	2018	2019	2020	2021	2022	2023
Production (in '000 units)	12	10	14	11	13	15	16

- Find the trend values and show the trend line on a graph paper.
- Estimate the production for 2024 and 2026.

PART-D

Answer the following question. The answer carries TWELVE marks.

[1x 10 =10]

21. The income levels of the employees are categorized into class intervals, and the number of employees within each income range is provided. By visualizing and interpreting the distribution, we can gain valuable insights into the income structure of the employees. The data provided includes the income ranges (in thousands) and the corresponding number of employees falling within each income range.

Income (in '000)	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100	100 – 110	110 – 120
No. of Employees	4	10	11	13	18	14	11	5

- (a) Draw a Histogram and Frequency Polygon for the above data.
- (b) Explain the procedure of plotting the Histogram and Frequency Polygon.
