

H

Roll No.

MB-105

**M. B. A. (FIRST SEMESTER)
END SEMESTER**

EXAMINATION, Jan., 2023

DATA DRIVEN DECISION-MAKING

Time : Three Hours

Maximum Marks : 100

Note : (i) This question paper contains **two** Sections—Section A and B.

(ii) Both Sections are compulsory.

(iii) Answer any *two* sub-questions among (a), (b) and (c) in each main question of Section A. Each question carries 10 marks each.

(iv) Section B consisting of Case Study is compulsory. Section B is of 20 marks.

Section—A

1. (a) What is Statistics ? Explain the importance of Statistics in trade and commerce. (CO1)

P. T. O.

(2)

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(b) Plot the following data on a graph paper :

(CO1)

Year	Sales (In Lakhs)
2000	123
2001	139
2002	134
2003	140
2004	157
2005	148
2006	192
2007	198

(c) From the following data compute the value of harmonic mean : (CO1)

Marks	No. of Students
10	20
20	30
25	30
40	15
50	5

(3)

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2. (a) State the empirical relationship between Mean, Median and Mode of a frequency distribution. (CO2)

(b) Find the MODE from given data by using the grouping method. (CO2)

Class	Frequency
0—5	5
5—10	7
10—15	9
15—20	18
20—25	16
25—30	15
30—35	6
35—40	3

(c) From the price of shares of X and Y given below, state which share is more stable in value : (CO2)

X	Y
41	91
44	93
43	96
48	92
45	90

P. T. O.

(4)

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46	97
49	99
50	94
42	98
40	95

3. (a) What do you understand by skewness ? How is it measured ? Distinguish clearly between positive negative skewness. (CO3)
- (b) Calculate range and its coefficient from the following data : (CO3)
- (i) 20, 8, 10, 0, -20, -10, 4
- (ii) 4, -10, 0, -2, -8, 10, 7, 2, -5, 0
- (c) Calculate rank-difference coefficient of correlation from the following data : (CO3)

X	Y
75	120
88	134
95	150
70	115
60	110
80	140
81	142
50	100

(5)

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4. (a) Distinguish between the normal and binomial distribution and discuss briefly the importance of normal distribution of statistical inferences. (CO4)
- (b) Find the probability of getting 53 Sundays : (CO4)
- (i) In a year
- (ii) In a leap year
- (c) "It is never safe to take published data at their face value." Elucidate the above statement. (CO4)

Section—B

5. Case Study :

(20 Marks)

X	Y
2	4
4	10
6	6
8	16
10	14

- (i) Find two regression equations by using above information. (CO5)
- (ii) Find correlation coefficient $\{r\}$, also between X and Y. (CO5)

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