



RAN-2510000101033001

F.Y.B.B.A. (AICTE) (Sem. I) Examination November - 2025 Business Statistics and Logic (MDC) (Paper - I)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the above details on your answer book.

Seat No.:

Student's Signature

Q.1. Answer the following questions. (Any Five)

(10)

- 1) Define mean with example.
- 2) The following are the prices of shares of a company from Monday to Friday: 200, 210, 208, 160, 220. Calculate the range and relative range of share prices.
- 3) The value of the correlation coefficient between two variables is $r = (-0.98)$. What does it indicate about the relationship between the two variables?
- 4) State the classical definition of Probability.
- 5) List down the properties of Poisson distribution.
- 6) Find the next term: 3, 9, 27, 81, ____.
(a) 162 (b) 243 (c) 324 (d) 486
- 7) Find the odd one: Rose, Lotus, Lily, Mango, Jasmine
(a) Rose (b) Lotus (c) Lily (d) Mango

Q.2. (a) Calculate the mean and median of the following frequency distribution:

(07)

Central Wages in Rs (x)	15	20	25	30	35	40	45
No. of wages earner (f)	3	25	19	16	4	5	6

- (b) The marks obtained by a student in 6 subjects are: 45, 50, 42, 55, 48, 60, Find the Standard Deviation and Coefficient of Standard Deviation.

(07)

OR

- (a) Find the mode of the following frequency distribution:

(07)

Class	0-5	5-10	10-20	20-30	30-50	50-70	70-100
Frequency	4	7	12	20	18	12	7

- (b) The prices of a commodity in 9 shops 27, 27.20, 27.60, 28.20, 28.50, 28.50, 28.50, 29.50, 30. Find mean deviation and coefficient of prices.

(07)

Q.3. (a) Using the given data, compute Karl Pearson's coefficient of correlation to examine the relationship between study hours and exam performance. Interpret the result.

(07)

Study Hours (X)	2	3	4	5	6	7	8	9	10	11
Exam Marks (Y)	50	54	56	60	65	67	72	76	78	82

- (b) Calculate the regression equations, x on y and y on x of the following data: (07)

x	1	2	3	4	5
y	2	5	3	8	7

OR

- (a) Four coins are tossed simultaneously. Find the probability of getting (i) 2 heads (07)
(ii) at least 2 heads.
- (b) If 3% of the electric bulbs manufactured by a company are defective, find the (07)
probability that in a sample of 100 bulbs (i) 0 bulbs (ii) 2 bulbs (iii) 0 or 2 bulbs
will be defective? ($e^{-3} = 0.0498$)

Q.4. Attempt any three. (12)

- 1) Write a short note: Measurement of Central Tendency
- 2) Write a short note: correlation and its properties
- 3) In a normal distribution mean $\mu = 20$ and standard deviation = 9.
Find the following values:
 - (i) $P\{15.5 \leq x \leq 21.5\}$
 - (ii) $P\{14 \leq x \leq 18.5\}$
 - (iii) $P\{x \geq 26\}$
 - (iv) $P\{x \leq 24.5\}$
 - (v) $P(x \geq 14)$
- 4) Mr. Deepak Mohan walks 5 km towards the south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. What direction is he facing right now? Also Justify your answer with diagram.
 - (a) West
 - (b) South
 - (c) North-East
 - (d) South-West
- 5) Tom is father of Anna. Anna is sister of Peter. How is Peter related to Tom?
Also Justify your answer.
 - (a) Son
 - (b) Nephew
 - (c) Brother
 - (d) Cousin