Seat No. : _____

MC-231

May-2025

Integrated MBA, Sem.-II

MBA (Integrated) in BI, MBA (Integrated) in APR

DSC-M-STAT-123 : Statistics-I

Time : 2:00 Hours] **[Max. Marks : 50**

Instructions : (1) This paper contains **Five** questions.
(2) **All** questions are **compulsory**.
(3) Question No. **1, 2, 3, 4** have internal options.
(4) Figures in the right side indicate marks.

1. Discuss in detail measurement of scales. **10**

OR

1. Explain in detail the role of data in business. **10**

2. Discuss in detail Non-probability sampling techniques. **10**

OR

2. Find KP's and Bowley's Co-efficient of Skewness. **10**

Class	0-2	2-5	5-10	10-15	15-25	25-35	35-50
Frequency	10	14	20	15	10	11	10

3. In an industry a managing director is to be appointed from three persons A, B and C. The chance of selection of A is twice than that of B, while the chance of selection of B is twice than that of C. The probabilities that these persons, if selected as managing director will increase the bonus of the workers are respectively 0.2, 0.3 and 0.4. If the bonus has increased in the industry, find the probability that A is selected as managing director. **10**

OR

3. (A) The probability distribution of a random variable is as follows : **5**

Find (i) k (ii) E(x + 3) (iii) V(2x + 3)

x_i	0	1	2	3	4	5	Total
P(x_i)	k	0.2	0.1	k	0.05	0.05	1

(B) 10,000 ticket of ₹ 1 are sold in a lottery. There is only one ticket in the lottery bearing a prize of ₹ 8,000. A person is having one ticket of the lottery. Find his expectation. **5**

4. (A) Define Poisson Distribution. State its properties. **5**

(B) In a book on an average there are 3 misprints in 5 pages. Using Poisson distribution, find the number of pages having more than 2 misprints in that book of 100 pages. ($e^{-0.6} = 0.5488$) **5**

OR

4. Define Binomial Distribution. State its properties. **10**

5. Do as Directed : (Any **Ten**) **10**

(1) The mean of Poisson distribution is 16. Its S.D. = _____

(2) State the empirical relation between mean, median, mode.

(3) State the formula to find variance of discrete variable.

(4) Give two example of discrete variable.

(5) What will be the probability of losing a game if the winning probability is 0.3 ?

(6) Seven students of a group get 30, 30, 30, 30, 30, 30, 30 marks in a test of 35 marks. What is the standard deviation of their marks ?

(7) State the types of classification.

(8) In a Poisson distribution P(0) = _____

(9) An event in the probability that will never be happened is called as _____.

(10) Give one example of univariate variable.

(11) The median of the data 6, 7, 11, 2, 4 and 9 is _____.

(12) In a Binomial Distribution, if p, q and n are probability of success, failure and number of trials respectively then variance is given by _____.

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