Roll No											

PRESIDENCY UNIVERSITY BENGALURU

SET A

SCHOOL OF MANAGEMENT
MID TERM EXAMINATION - DEC 2023

Semester : Semester I - 2023
Course Code : MBA1007
Course Name : Sem I - MBA1007 - Business Statistics
Program : MBA

Date : 04-DEC-2023
Time : 10:00AM - 11:30AM
Max Marks : 50
Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS **(5 X 2 = 10M)**

1. Compute range for the following set of values.
18 29 38 10 46 9
(CO1) [Knowledge]

2. Define random experiment and give an example.
(CO1) [Knowledge]

3. Define sample space? Give an example.
(CO1) [Knowledge]

4. Define positional values and give an example.
(CO2) [Knowledge]

5. Write the formula for quartile deviation and coefficient of quartile deviation.
(CO2) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **(3 X 6 = 18M)**

6. The following are the cost per ounce ($) for a sample of 14 dark chocolate bars: 0.57 1.51 0.57 0.55 0.86 1.41 0.90 0.68 0.72 0.92 1.14 1.42 0.94 0.77. Compute median and mode.
(CO1) [Comprehension]

7. The radio music listener market is diverse. Listener formats might include adult contemporary, album rock, top 40, oldies, rap, country and western, classical, and jazz. In targeting audiences, market researchers need to be concerned about the ages of the listeners attracted to particular formats. Suppose a market researcher surveyed a sample of 170 listeners of country music radio stations and obtained the following age distribution.

Age	Frequency
15–under 20	9
20–under 25	16
25–under 30	27
30–under 35	44
35–under 40	42
40–under 45	23
45–under 50	7
50–under 55	2

Compute Q1 and Q3

(CO2) [Comprehension]

8. According to Nielsen Media Research, approximately 67% of all U.S. households with television have cable TV. Seventy-four percent of all U.S. households with television have two or more TV sets. Suppose 55% of all U.S. households with television have cable TV and two or more TV sets. A U.S. household with television is randomly selected. What is the probability that the household has cable TV or two or more TV sets?

(CO1) [Knowledge]

PART C

ANSWER THE FOLLOWING QUESTION **(2 X 11 = 22M)**

9. The marketing manager of a large supermarket chain would like to use shelf space to predict the sales of pet food. A random sample of 12 equal- sized stores is selected, with the following results. Compute the regression equation of Y on X

Store	Shelf Space (*X*) (Feet)	Weekly Sales (*Y*) ($)
1	5	160
2	5	220
3	5	140
4	10	190
5	10	240
6	10	260
7	15	230
8	15	270
9	15	280
10	20	260
11	20	290
12	20	310

(CO1) [Application]

10. A random sample of voters in Kota, Rajasthan, is classified by age group, as shown by the following data. Compute coefficient of variation

Age Group	Frequency
18 – 24	17
24 – 30	22
30 – 36	26
36 – 42	35
42 – 48	33
48 – 54	30
54 – 60	32
60 – 66	21
66 – 72	15

(CO2) [Application]