BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – MBA-2024
Course Name – Business Statistics and Analytics for Decision-Making
Course Code - MBA10106
(Semester I)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Select the correct option. Subset of selected population is called _____.

a) descriptive portion b) elementary portion
c) inferential portion d) sample

(ii) The following data show the number of hours worked by 200 statistics students.

Hours	Number of Students
0 - 9	40
10 - 19	50
20 - 29	70

Predict the relative frequency of students working 9 hours or less.

a) 40 b) 50
c) 90 d) 70

(iii) Select the correct option. Questionnaire survey method is used to collect _____.

a) Secondary data b) Qualitative variable
c) Primary data d) None of these

(iv) Select the correct option. The weights of students in a college/ school is a _____.

a) Discrete Variable b) Continuous variable

c) Qualitative variable

d) None of these

(v) Choose the correct option. In a throw of dice, the probability of getting number greater than 5 is:

a) 1/6

b) 1/3

c) 0

d) 1

(vi) Choose the correct option. Three unbiased coins are tossed, the probability of getting at least 2 tails is:

a) 1/3

b) 1/6

c) 1/2

d) 1/4

(vii) You asked five of your classmates about their height. On the basis of this information, you stated that the average height of all students in your university or college is 67 inches. Then examine This is an example of:

a) Descriptive statistics

b) Inferential Statistics

c) Parameter

d) Population

(viii) Choose the correct option. A card is drawn from a pack of 52 cards. Evaluate The probability of getting a queen of club or a king of heart is _____.

a) 1/26

b) 1/52

c) 3/52

d) none of these

(ix) Identify the correct statement. The total relative frequency is always _____.

a) One

b) Half

c) Two

d) Three

(x) Identify the correct option. A Histogram is a set of adjacent _____.

a) Squares

b) rectangles

c) Triangles

d) none of these

(xi) Predict total angles (in degree) in Pie chart.

a) <p style="text-align: left;"> 90

b) 180

c) 270

d) 360

(xii) Predict the median of the following data: 160, 180, 200, 280, 300, 320, 400.

a) 140

b) 300

c) 180

d) 280

(xiii) Select the correct option. The first order raw moment is equal to _____.

a) 0

b) 1

c) 2

d) None of these

(xiv) Select the correct option. The variance of a constant is _____.

a) Constant

b) 0

c) Negetive

d) None of these

(xv) Choose the correct option. Is standard deviation calculated from the Harmonic Mean (HM)?

a) Always

b) Sometimes

c) Never

d) None of these

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define primary and secondary data. (3)

3. An urn contains 8 white and 3 red balls. If 2 balls are drawn at random, Evaluate the probability that (i) both are white, (ii) both are red, (iii) one of each colour. (3)

4. In a single cast with two dice show that the chance of throwing a total of 7 of 1/6. (3)

5. Compute the coefficient of correlation of the following data: (3)

x	1	2	3	4	5
y	6	8	11	8	12

6. Represent the sales (monthly) of Maruti cars for 1990 of park Motor Co. in India in a line diagram from given data: (3)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
No car sold	175	185	160	110	120	80	85	88	120	110	155	170

OR

Draw a Simple Bar chart diagram to represent year wise (5 yearly) students input (in thousands) in a large Indian University. (3)

Year	1960	1965	1970	1975	1980	1985	1990
No. of student	20	27.5	23.5	30.0	16.5	25	35

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Define class limits, class boundaries, class mark, class width, percentage frequency, relative frequency and frequency density. (5)

8. Explain the requisites of a good average. (5)

9. Evaluate the arithmetic mean and median of the frequency distribution on monthly wages of 100 workers. (5)

Wages	260-269	270-279	280-289	290-299	300-309	310-319	320-329
No of workers	6	14	29	23	16	10	2

10. Evaluate the standard deviation and coefficient of variance. (5)

Height	125-135	135-140	140-155	155-165	165-175	175-185
No. of students	2	7	24	27	13	3

11. Identify the linear regression equation of Y on X for the data. (5)

X	1	2	3	4	5
Y	3	2	5	4	4

12. Illustrate a pie chart diagram to represent the following data relation to cost of manufacture: (5)

Item	Cost in Rs.
Cost of Materials	38400
Cost of Labour	30720
Direct expenses	11520
Factory Overhead	15360

OR

Illustrate a compound bar chart diagram of the production of paddy crops (in Lakh tons) for three different states A, B, C for the years 1947, 1957, 1967 from the following information. (5)

Production of Paddy in lakh tons			
States	1947	1957	1967
A	28	40	38
B	50	53	55
C	38	30	53