Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA Integrated – SEMESTER – II - EXAMINATION – SUMMER 2022

Subject Code: 2527102 Date: 29/07/2022

Subject Name: Business Statistics

Time: 10:30 AM TO 01:30 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 **(a)** What is statistics ? Explain in detail types of variable with example . **07**

(b) Explain in detail two dimensional diagram with hypothetical example . **07**

Q.2 **(a)** Diffreciate correlation and coregression . **07**

(b) Determine the Interquartile range on the following data. **07**

44 18 39 40 59
46 59 37 15 73
23 19 90 58 35
82 14 38 27 24
71 25 39 84 70

OR

(b) Draw histogram and frequency polygon graph from the following data : **07**

Wages	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Workers	10	14	17	20	17	14	10

Q.3 **(a)** Explain in detail various types of graph in presentation of data . **07**

07

(b) Find correlation coefficient for the following data:

X	44	46	46	48	52	54	54	56	60	60
Y	36	40	42	40	42	44	46	48	50	52

OR

Q.3 **(a)** Write a short note on various classification of correlation with respective graph /chart . **07**

(b) Find the regression line equation for the following data: **07**

X	50	60	50	60	80	50	80	40	70
Y	30	60	40	50	60	30	70	50	60

Q.4 **(a)** Find Mean and Median for the following data: **07**

Marks	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
Frequency	7	15	24	31	42	30	26	15	10

(b) Determine following term value : **07**

1. 4P4 + 8P2
2. 10Pr
3. 48C2 + 25C24
4. nCn-2 = 28

OR

Q.4 **(a)** Find standard deviation for the following data: **07**

Xi	45	50	55	60	65	70	75	80
Fi	3	5	8	7	9	7	4	7

(b) Explain in detail measures of central tendency . **07**

Q.5 **(a)** Briefly explain methods of assigning probability . **07**

07

(b) A bag contains 3 black, 4 white and 5 red balls. A ball is drawn at random. What is the probability that it is a (1) black ball (2) white ball (3) red ball (4) non-black ball.

OR

Q.5 **07**

(a) Given X = {1,3,5,7,8,9}, Y = {2,4,7,9} and Z = {1,2,3,4,7}, solve the following

a) X U Z b) X Π Y c) X Π Z
d) X U Y U Z e) X Π Y Π Z f) (X U Y) Π Z
g) (Y Π Z) U (X Π Y)

(b) Diffreciate following term : **07**

1. Group and ungroup data
2. Discrete and continues variables
3. With replacement and without replacement

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