MBA (FT/PT) Degree First Semester University End Examination, March 2021
20-371-0102/20-372-0102: Statistics for Managers
(Regular)

Time: 3 Hrs

Max. Marks 50

PART A
(Answer ALL Questions. Each question carriers 2 marks)

1. Give any four properties of a good average.
2. State Multiplication rule of Probability.
3. The mean of a binomial distribution is 20 and SD is 15. What is the value of 'p'?
4. What is Time Series Data?
5. Define Rank Correlation.

(5*2=10)

PART B
(Answer ANY FIVE Questions. Each question carriers 4 marks)

6. State whether the following two attributes 'condition of home' and 'condition of child' are independent. (Table value of Chi square at 5% level of significance is 3.84)

Condition of Child	Condition of Home		
	Clean	Dirty	Total
Clean	70	50	120
Fairly Clean	85	20	100
Dirty	35	45	80
Total	185	115	300

7. What is continuous probability distribution? State the main properties of a normal distribution.

8. During the 10 innings of a tournament, the scores obtained by two batsmen are given below:

   Batsman A: 28   69   30   53   45   65   32   78   80   20

   Batsman B: 37   49   68   21   93   44   60   64   50   64

   Find: (a) Who is the better Scorer, and (b) Who is the more consistent performer?

9. A skill test was administered to 5 persons each in Batch A & Batch B. Test whether there is any significance difference in their skill level after training at 5% level. (Table value of 't' at 5% level for df 8 is 1.86)

Candidates	1	2	3	4	5
Batch A	120	90	73	138	120
Batch B	130	108	75	142	125

10. The marks obtained by 8 students in the GD and Interview conducted by a business school are given.

Student	1	2	3	4	5	6	7	8
GD Marks (out of 100)	15	20	28	12	40	60	20	80
Interview Marks (out of 100)	40	30	50	30	20	10	30	60

What is the correlation between the GD marks and Interview marks?

11. Explain the use of Regression method as a forecasting technique?

12. Find the mean and median from the following data:

Class	0-10	10-20	20-40	40-60	60-90
Frequency	3	5	16	12	4

$(5*4 = 20)$

PART C

(Answer ANY TWO Questions. Each question carriers 10 marks)

13. From the data given below,

Economics (X)	35	38	25	32	21	46	39	28	44	32
Statistics (Y)	33	46	39	41	46	42	31	40	23	49

Find:

   (a) Regression equations of (i) X on Y and   (ii) Y on X (2 marks each)
   (b) Coefficient of Determination (3 marks)
   (c) The most likely marks in statistics when marks in economics are 40 (3 marks)

14. Briefly explain the significance of hypothesis testing in business research. What are the steps involved in hypothesis testing process? Also give a brief note on any two tests of your choice.

15. A bulb manufacturing company makes florescent lamps which has a specification of mean life of 1600 hours. Testing a sample of 400 bulbs, the company finds that the mean life of the sample is 1650 hours with a standard deviation of 150. Has the company deviated from the original specification for mean life? State and test the hypothesis

$(2*10 = 20)$

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