Registration No : | | | | | | | | | | |

Total Number of Pages : 02 **IMBA**
16IMN103

1st Semester Regular/Back Examination 2019-20
BUSINESS STATISTICS
BRANCH : IMBA
Max Marks : 100
Time : 3 Hours
Q.CODE : HBR714

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.
The figures in the right hand margin indicate marks.

Part-I

Q1 **Only Short Answer Type Questions (Answer All-10)** **(2 x 10)**

a) Given that mean=50,C.V=40%,Skewness (Karl'spearson)=-0.4.Find out S.D, mode and median.
b) Find S.D Of 3,6,9,12,15,18,21,24,27 and 30.
c) The Harmonic mean of 10 and 15 observations are 10.2 and 12.5.Find combined H.M
d) If C.V(x)=40% and C.V(y)=60%. S.D(x)=16,S.D(y)=15.Find Mean of X and Mean of Y.
e) If Q.D is 40.,find M.D and S.D
f) The mean of 50 observations is 35.Later on it was found that one observation 45 is misread as 54.Find out corrected mean.
g) Explain advantages of A.M
h) Find the Quartile Deviation for the following data :
391, 384, 591, 407, 672, 522, 777, 733, 1490, 2488
i) What is nominal and ordinal data?
j) The probability that a boy will get a scholarship is 0.65. and that a girl will get it is 0.70. What is the probability thatatleast one of them will get the scholarship.

Part-II

Q2 **Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)** **(6 x 8)**

a) The sum of deviation of a set of values $x_1,x_2,x_3.....x_n$ measured from 50 is -10. And the sum of deviation of values from 46 is 70.Find the value of n and the mean.
b) You note that your officer is happy on 60% of your calls, so you assign a probability of his being happy on your visit as 0.6.You have noticed also that if he is happy ,he accedes to your request with a probability of 0.4 where as if he is not happy ,he accedes to the request with probability of 0.1. You call one day ,and he accedes to your request. What is the probability of his being happy?
c) If A.M and G.M of two numbers are 10 and 8 respectively. Find the numbers.
d) The mean of 5 observations is 6. And variance is 8. If three numbers are 2,4,8.Find the other two.
e) Differentiate between primary and Secondary data.
f) What is tabulation? Explain essential characteristics of tabulation.
g) What do you mean by classification? Explain its objectives and types.
h) Calculate β1 and β2 for the following data :

X:	0	1	2	3	4	5	6	7	8
F :	5	10	15	20	25	20	15	10	5

i) What do you mean by Skewness ? What are the various measures ofskewness.
j) What do you mean by kurtosis ?What is the measure of measuring kutosis.?
k) A bag contains 25 balls numbered from 1 t0 25.One ball is drawn at random. Find the probability that the number of the drawn ball will be a multiple of (I) 3 or 5 (II)2 or 6.

I) Calculate Bowley's coefficient of skewness from the following data :

Mid value:	75	100	125	150	175	200	225	250
Frequency:	35	40	48	100	125	80	50	20

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 Define Statistics . Discuss in detail the importance of statistics with special reference to business and industry? **(16)**

Q4 Find mean,median and mode of the following data : **(16)**

Mid Value:	10	30	50	70	90	110	130	150	170	190
Frequency:	12	15	18	22	24	37	40	43	18	12

Q5 You are given below the daily wages paid to workers in two factories. **(16)**

Daily wages(Rs):	No of workers in factory	
	A	B
200-300	15	25
300-400	30	40
400-500	44	60
500-600	60	35
600-700	30	20
700-800	14	15
800-900	7	5

Using mean and standard deviation ,answer the following question:

(I) Which factory pays higher average wages?

(II) In which factory are wages more variable?

(III) Which factory has to pay more wages in a month assuming the both work for 20 days in a month.

Q6 **a)** What is Bays Rule and explain its uses. **(16)**

b) What are the Procedures involved in collection of Primary data