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

**Total Number of Pages: 02** **MAM**
**IMB103**

**1st Semester Back Examination 2017-18**
**BUSINESS STATISTICS**
**BRANCH : MAM**
**Time: 3 Hours**
**Max Marks: 70**
**Q.CODE: B907**

**Answer Question No.1 which is compulsory and any five from the rest.**
**The figures in the right hand margin indicate marks.**

**Q1** **Answer the following questions :** **(2 x 10)**

**a)** Explain three uses of statistics
**b)** What are the requirements of statistical units?
**c)** Name the main sources of secondary data.
**d)** If byx=-02,bxy=-04.Find out correlation between x and y.?
**e)** Explain limitations of Geometric mean.
**f)** What is the relation between 1st quater,Median and 3rd Quarter.
**g)** If mean=55,mode=50,S.D=22,What is the value of coefficient of skewness.
**h)** The S.D of 100 observation is 75.If 5 is added in each observation, What will be the new S.D.
**i)** Find the standard deviation of first 20 natural numbers.
**j)** Why absolute measures are not so useful in skewness?

**Q2** **a)** Find mean, median and mode of the following information : **(5)**

| X | 100-200 | 100-300 | 100-400 | 100-500 | 100-600 |
|---|---|---|---|---|---|
| f | 15 | 33 | 63 | 83 | 100 |

**b)** From the following information calculate Harmonic Mean. **(5)**

| Mid Value | 15 | 25 | 35 | 45 | 55 |
|---|---|---|---|---|---|
| f | 30 | 75 | 70 | 135 | 220 |

**Q3** **a)** Calculate Quartile deviation for the following data **(5)**

| X | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 |
|---|---|---|---|---|---|
| f | 22 | 38 | 46 | 35 | 20 |

**b)** Explain merits and demerits of Mean deviation. **(5)**

**Q4** Fill in the blanks: **(10)**

| | Series I | Series II | Series-III | Combined |
|---|---|---|---|---|
| No.of Observation | 50 | ? | 90 | 200 |
| Mean | 113 | ? | 115 | 116 |
| Standard Deviation | 6 | 7 | ? | 7.746 |

**Q5** Discuss the meaning and scope of Statistics bringing out its importance particularly in the field of business.? **(10)**

**Q6** What do you mean by classification and tabulation ?Discuss their importance. **(10)**

**Q7** **a)** From the following information,find out correlation between X and Y. If n=8, Mean of X=5,Mean of Y=4,$\sum X^2$=300, ,$\sum Y^2$=200,$\sum (X+Y)^2$ =900 **(5)**

**b)** From the following information Find out two regression equation. **(5)**

| | | | | | |
|---|---|---|---|---|---|
| X | 4 | 6 | 9 | 12 | 15 |
| Y | 6 | 8 | 9 | 10 | 11 |

**Q8** The arithmetic mean and standard deviation of a series of 20 observations were 20 and 5 respectively. Later on it was found that 13 was misread as 30. Find corrected mean and standard deviation. **(10)**