

MSc DEGREE EXAMINATION MAY 2018
(Third Semester)

Branch – BIOCHEMISTRY

BIOSTATISTICS

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

- 1 a Write the steps in conducting scientific research.
OR
b Explain multiple box diagram with an example.
 - 2 a Define the following : (i) quartile deviation (ii) standard deviation (iii) CV.
OR
b From the following data, compute co-efficient of skewness :
- | | | | | | |
|-----|-----|------|-------|-------|-------|
| X : | 5-7 | 8-10 | 11-13 | 14-16 | 17-19 |
| f : | 14 | 24 | 38 | 20 | 4 |
- 3 a Explain Bayer's theorem.
OR
b State multiplication theorem of probability.
 - 4 a Define null hypothesis, standard error and two tailed test.
OR
b Write about Duman's Multiple range test.
 - 5 a Differentiate correlation and regression.
OR
b Elaborate the applications of SPSS.

SECTION -B (45 Marks)

Answer any THREE questions

ALL questions carry EQUAL Marks (3 x 15 = 45)

- 6 Explain various methods of primary data collection.
- 7 Calculate standard deviation and CV for the following data :

X :	58	59	60	54	65	66	52	75	69	62
Y :	87	89	78	71	73	84	65	66	56	46

- 8 i) Define Poisson distribution and mention its role.
ii) Fit a Poisson distribution for the following data and test the goodness of fit :

Mistakes per page :	0	1	2	3	4
No. of page :	211	90	19	5	0

- 9 i) Write the applications of t distribution
ii) An intensive coaching was given to 11 students and they were examined twice in a month. The results of these two test are given below. State whether there has any improvement in the results of second test over first test :

Mark I test :	19	16	23	17	18	20	18	21	20	19	13
Mark II test :	17	20	23	20	20	22	23	18	19	22	24

The value of t for 10 degrees of freedom at 5% level of significance is 2.228.

- 10 Find Karl Pearson's coefficient of correlation between the age of husband and wife and test for its significance.

Husbands Age :	20	22	23	25	25	28	29	30	30	34
Wife's Age :	18	20	22	24	21	26	26	25	27	29