PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 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 Describe the different methods of collecting primary data.
OR
b Design a single diagram to exhibit the information relating to the causes of death.

Causes of death	Number
Diarrhoea & Enteritis	60
Pre maturity & Atrophy	170
Bronchitis & Pneumonia	90

2 a Enumerate the properties of symmetrical, positively & negatively skewed distribution.
OR
b The following data are the height of 10 students. Calculate SD.
60, 61, 61,62, 63, 63, 63, 64, 64, 70

3 a A form has advertised for a steno for its office with three qualities, English knowing, good looking and smart. Suppose the probability of English knowing is 1/50. Good looking 1/100 and smart 1/1000. Find out the probability of the firm getting such a steno.
OR
b What is a poisson distribution? Write the properties of poisson distribution.

4 a i) What is Null & Alternative hypothesis?
ii) Enlist the applications of chi-square test.
OR
b Write the steps involved in Wilcoxon signed rank test.

5 a Explain the uses of scatter diagram & correlation graph in the study of the relationship between two variables.
OR
b Enlist the applications of statistical package for the social sciences.

SECTION -B (45 Marks)
Answer any THREE questions
ALL questions carry EQUAL Marks (3 x 1 5 = 45)

6 Explain in detail about two dimensional diagram.

Common on the growth performance of fishes that have been reared in three types of water given below using simple & weighted averages :

Types of fishes	Types of fishes					
	Estuary		River		Pond	
	Weight (g)	No. of fishes (hundreds)	Weight (g)	No. of fishes (hundreds)	Weight (g)	. No. of fishes (hundreds)
Tilapia	71	3	82	2	81	2
Mullet	83	4	76	3	26	2.5
Carp	73	5	73	6	74	4.5
Cat fish	74	2	76	7	58	2
Channa	65	3	65	3	70	7
Catla	66	3	60	7	73	2

Calculate the SD and CV,

8 a) What is meant by the theoretical frequency distribution? (2)

   b) Discuss the salient features, conditions & constants of binomial distribution. (8)

   c) Write any five properties of Normal distribution (normal curve).   -   (5)

9 a) Write a note on students 't' distribution.

   b) The systolic blood pressure of 10 persons in the age group of 45-50 is given below : 148, 128, 147, 127, 150, 145, 124, 140, 142, 149
      i)   In the light of the data discuss the suggestion that the average systolic pressure of the population is 150.
      ii) Set 95% confidence interval for the systolic blood pressure for persons of that age group.

10 a) Explain the following terms partial & multiple correlation.

   b) Two referees in a flower beauty competition rank the 0 types of flowers as follows :

Referee A :	1	6	5	10	3	2	4	9	7	8
Referee B :	6	4	9	8	1	2	3	10	5	7

Use the rank-correlation coefficient & find out what degree of agreement is there between the referees.

Z-Z-Z   END