

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
BSc DEGREE EXAMINATION JUNE 2014  
(Sixth Semester)

Branch – BIOTECHNOLOGY

BIostatistics

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 What is the difference between graphical and diagrammatic representation?
- 2 Define histogram.
- 3 Write the formula for standard deviation for continuous series.
- 4 Define correlation.
- 5 Define probability.
- 6 Write the formula for Poisson Distribution.
- 7 Define hypothesis.
- 8 When we apply analysis of variance technique?
- 9 Where TANGRA is applied?
- 10 Expand SPSS.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Represent the following data by simple bar diagram :
 

Country	:	India	Germany	U.K	China	Sweden
Birth rate / 1000	:	33	16	20	40	15

OR
- b The weight of 30 students on a college campus was recorded as follows :  
143, 151, 138, 121, 139, 133, 119, 133, 122, 123, 136, 104, 104, 137, 127,  
113, 99, 112, 132, 90, 112, 121, 132, 126, 129, 140, 126, 123, 107, 134  
Summarise this raw data with a frequency distribution using seven classes  
or class intervals.
- 12 a Find mean from the following data :
 

Marks	:	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	:	42	44	58	35	26	15

OR
- b Find Karl Pearson's coefficient of correlation from the following data :
 

x	:	6	2	10	4	8
y	:	9	11	7	8	7
- 13 a In a experiment, effect of a pesticide was studied in relation to fish mortality. The probability of survival was found to be 20 percent. What is the probability that four or more fishes would die in a batch of six fishes which are exposed to this pesticide?  
OR
- b Write any five examples where poisson distribution is applicable.
- 14 a Write down the procedure for testing a hypothesis.  
OR
- b Write down the chi-square testing procedure.

Cont...

15 a What are the application of SPSS?

OR

b Explain the usage of determining software.

**SECTION - C (30 Marks)**

Answer any **THREE** Questions.

**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 What are the different types of diagrams – Explain.

17 Find median and mode from the following data :

Age	:	0-10	10-20	20-30	30-40	40-50	50-60
No. of People	:	12	18	27	20	17	6

18 Write down the characteristics of Normal Distribution.

19 Find the Regression equation of y on x.

x	:	100	200	300	400	500	600	700
y	:	30	50	60	80	100	110	130

20 Sheeps were immunized for mumps and following results were obtained  
Give your inference on effectiveness of immunization.

	Died	Survived	Total
Immunized	2	10	12
Non - Immunized	6	6	12
Total	8	16	24

(Given  $\chi^2 = 3.84$  for 1 d. f at 5% level of significance)

Z-Z-Z

END