PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(Fifth Semester)

Branch - ZOOLOGY

BIOSTATISTICS

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1. A_____ is a complete enumeration of each and every unit of the universe.
   (i) census   (ii) sample   (iii) field   (iv) survey

2. _____refers to the column heading
   (i)Title   (ii) Body   (iii) Stub   (iv) Caption

3. If median = 20.6 and mode = 26 then mean =_____.
   (i) 17.0   (ii) 17.9   (iii) 19.7   (iv) 19.0

4. _____is not based on each and every item of the distribution.
   (i) variance   (ii) SD   (iii) Mean   (iv) Range

5. The coefficient of correlation is the _____mean of two regression coefficients.
   (i) arithmetic   (ii) harmonic   (iii) geometric   (iv) Range

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6. a) Describe the mailed questionnaire method of collecting primary data.
   (OR)
   a) Explain the scope of the biostatistics.

7. a) Distinguish graph and diagram.
   (OR)
   a) Explain the main types of classifications.

8. a) Calculate the median from the following data

Marks	0-10	10-30	30-60	60-80	80-90
No of Students	5	15	30	8	2

(OR)

b) From the following data calculate the missing value when mean is 115.86

Wages	110	112	113	117	X	125	128	130
No. of Workers	25	17	13	15	14	8	6	2

9. a) The mean and standard deviation of normal distribution are 60 and 5 respectively. Find the inter-quartile range and the mean deviation of the distribution.

(OR)

b) Calculate standard deviation from the following data

Age Under	10	20	30	40	50	60	70	80
No. of person dying	15	30	53	75	100	110	115	125

10. a) Find the most likely production corresponding to a rainfall 40' from the following data

	Rainfall	Production
Average	30'	500kg
Standard Deviation	5'	100kg
Coefficient of Correlation(r)		0.8

(OR)

b) Calculate the correlation coefficient from the following data
$N = 10, \sum X = 350, \sum Y = 310 , \sum(X - 35)^2 = 162, \sum(Y - 31)^2 = 222,$
$\sum(X - 35)(Y - 31) = 92.$

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

11. a) Explain the following topics   (i) Sample   (ii) Population.

(OR)

b) Explain the various methods of collecting primary data

12. a) Draw a pie diagram for the following data of Sixth Five Year Plan Public Sector outlays

Agriculture and Rural Development	12.9%
Irrigation, etc.	12.5%
Energy	27.2%
Industry and Minerals	15.4%
Transport, Communication, etc.	15.9%
Social Services and Others	16.1%

(OR)

b) Draw a histogram and frequency polygon from the following data

Marks	0-10	10-20	20-40	40-50	50-60	60-70	70-90	90-100
No of Students	4	6	14	16	14	8	16	5

13. a) Find the missing frequency from the following data

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No of Students	5	15	20	-	20	10

(OR)

b) Calculate arithmetic mean, median and mode from the following frequency distribution:

Variable	10-13	13-16	16-19	19-22	22-25	25-28	28-31	31-34	34-37	37-40
Frequency	8	15	27	51	75	54	36	18	9	7

14. a) Calculate coefficient of quartile deviation and coefficient of variation from the following data

Marks	Below 20	Below 40	Below 60	Below 80	Below 100
No of Students	8	20	50	70	80

(OR)

b) The mean weight of 150 students is 60 kg. The mean weight of boys is 70 kg with a standard deviation of 10 kg. For the girls, the mean weight is 55 kg and the standard deviation is 15 kg. Find the number and the combined standard deviation.

15. a) Distinguish between correlation and regression analysis.

(OR)

b) From the following data obtain two regression equations

X	6	2	10	4	8
Y	9	11	5	8	7

Z-Z-Z   END