PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(First Semester)

Branch- STATISTICS

DESCRIPTIVE STATISTICS

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 meant by Statistics?
2   State the types of classification.
3   Define an average.
4   Find the median of the set of observations 27, 36, 28, 18, 35, 26, 20, 20, 35, 40, 26.
5   Define covariance.
6   Write any two properties of regression coefficients.
7   Define statistical probability.
8   A coin is tossed twice. Find the probability of getting atleast one head.
9   When a variable is said to be discrete?
10   For the set of observations 13,25,36,22,18,45,21,26,30,22 find range and its coefficient.

SECTION - B (25 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5 x 5 = 25)

11 a Explain the sources of secondary data.

OR

   b   What are the methods used for the collection of primary data.

12 a Find the mean deviation about the mean for the following data:

Value (x)	10	11	12	13	14
Frequency (f)	3	12	18	12	3

OR

   b   Calculate the A.M, G.M of the following quantities: 3,6,24,48.

13 a   The following are the ranks obtained by 10 students in statistics and mathematics.

Statistics	1	2	3	4	5	6	7	8	9	10
Mathematics	1	4	2	5	3	9	7	10	6	8

   Find the rank correlation coefficient.

OR

   b Point out the difference between correlation and regression coefficient.

14 a State and prove multiplication theorem on probability.

OR

   b State and prove addition theorem on probability.

15 a Define distribution function and state its properties.

OR

   b Prove addition theorem on exception for discrete case.

Cont...

SECTION - C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks (3 x 10 = 30)

16 Construct a histogram and frequency curve for the following frequency distribution.

Weight (in kg)	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80
Number of men	4	5	9	6	11	5	7	3

17 Find the mean, median and mode for the following data and verify the empirical relation.

j Class	1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
frequency	3	7	13	17	12	10	8	8	6	6

18 Find the equation of regression lines for the following data:

x:	25	28	35	32	36	36	29	38	34	32
y:	43	46	49	41	36	32	31	30	33	39

19 State and prove Baye's theorem.

20 Find out Bowley's coefficient of skewness from the following data:

Mid value	21	27	33	39	45	51	57
Frequncy	18	22	40	50	38	12	4

Z-Z-Z   END