PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 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   Define Tabulation.
2   Write any uses of diagrammatic representation.
3   State any two merits of Arithmetic mean.
4   Write the formula for coefficient of variation and write its uses.
5 . What is meant by Correlation?
6   Write regression equation of X ON Y.
7   Define independent events.
8   What is meant by Conditional Probability?
9   Define Continuous random variable.
10   Define Expectation of a random variable.

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

11 a   Explain any two methods of Collecting Primary Data.
                         OR
    b   Draw pie chart for the following data:

Types of Commodity	Expenditure in Rupees
Food	300
Rent	200
Clothes	125
Education	110
Miscellaneous	75
Savings	90

12 a   Calculate mean for the following data:

x	64	63	62	61	60	59
f	8	18	12	9	7	6

                         OR
    b   Calculate Standard Deviation for the following data:

   92   49   52   82   102   60   35   24   4

13 a   Explain the types of correlation with example.
                         OR
    b   Write the properties of regression coefficients.

14 a   A Bag contains 7 red, 12 white and 4 green balls. What is the probability that
         (i) 3 balls drawn are all white and   (ii) 3 balls drawn are one of each COLOUR
                         OR
    b   State and prove the addition theorem of probability.

15 a A random variable X has the following probability distribution.

x	-2	-1	0	1	2	3
P(x)	0.1	K	0.2	2K	0.3	K

Find the value of K and calculate the mean

OR

b Define distribution function. Give its properties.

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

16 Explain different types of classification.

17 Calculate mean, median and mode for the following data:

Class	5-10	0-15	15-20	20-25	25-30	30-35
f	2	9	29	54	11	5

18 Calculate Karl Pearson's coefficient of correlation for the following data:

X	45	55	56	58	60	65	68	70	75	80	85
Y	56	50	48	60	62	64	65	70	74	82	90

19 State and prove Baye's theorem.

20 In a continuous distribution whose relative frequency diversity is given $f(x) = y_0 x(2-x)$ $0 \leq x < 2$. Find mean and variance.

Z-Z-Z   END