PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2022
(First Semester)

Branch – STATISTICS

DESCRIPTIVE STATISTICS

Time: Three Hours   Maximum: 50 Marks

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

1   Statistics deals with only ...... data
     (i) Quantitative   (ii) Qualitative
     (ii) a & b   (iv) Primary data

2   Which of the following is the most unstable average?
     (i) Mode   (ii) median
     (iii) Geometric mean   (iv) Harmonic mean

3   If the coefficient of Kurtosis γ^2 of a distribution is zero, the frequency curve is
     (i) Leptokurtic   (ii) Platykurtic
     (iii) mesokurtic   (iv) equal

4   The Value of Pearson's coefficient of correlation ranges between
     (i) 0 and 1   (ii) 0 and -1
     (iii) 0 and α (iv) -1 to +1

5   The equation $y=ab^x$ represents
     (i) Compertz curve   (ii) exponential curve
     (ii) logarithmic curve   (iv) index value

SECTION-B (15 Marks)
Answer ALL questions
ALL questions carry EQUAL marks (5 x 3 = 15)

6   a) Define statistics and its importance.

(OR)

b) Explain mailed questionnaire method.

7   a) Calculate the median for the following frequency distribution:

Marks	45-50	40-45	35-40	30-35	25-30	20-25	15-20	10-15	5-10
No.of students	10	15	26	30	42	31	24	15	7

(OR)

b) Calculate the arithmetic mean by the short-cut method using frequency distribution.

Marks	20	30	40	50	60	70
No.of students	8	12	20	10	6	4

8   a) Write down the Properties of correlation.

(OR)

b) Explain the features of Spearman's correlation coefficient.

9   a) Write properties of regression coefficients.

(OR)

b) Explain the measures of Kurtosis.

Cont..

10 a) Write about formulae in MS Excel.
                    OR
    b) How do we start or open Excel screen and write the parts of a Excel screen.

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

11   a) Distinguish between primary data and secondary data.
                    (OR)
      b) Discuss various methods of Collecting primary Data.

12   a) What is median? State its Advantages and disadvantages.
                    (OR)
      b) Calculate the mean and standard deviation for the following table giving the age distribution of 542 members.

Age (in years)	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No. of members	3	61	132	153	140	51	2

13   a) Explain Karl Pearson's Coefficient of Correlation.
                    (OR)
      b) Calculate the Pearson's coefficient of correlation from the following data using 44 and 26 respectively as the origin of X and Y.

X	43	44	46	40	44	42	45	42	38	40	42	57
Y	29	31	19	18	19	27	27	29	41	30	26	10

14   a) Explain Scatter diagram method.
                    (OR)
      b) Calculate the coefficient of correlation from the following data by the Spearman's rank difference method .

Price of Tea (Rs)	75	88	95	70	60	80	81	50
Price of Coffee (Rs)	120	134	150	115	110	140	142	100

15   a) Calculate Bowley's Coefficient of Skewness from the following data:

Class intervals	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
Frequency	7	10	20	13	17	10	14	9

                    (OR)

      b) Fit a straight line trend by the method of least squares to the following data:

Year:	2002	2003	2004	2005	2006	2007
Production (Tonners)	24	25	29	26	22	24

                    Z-Z-Z   END