PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2019
(Third Semester)

Branch - **FOOD PROCESSING TECHNOLOGY**

DATA ANALYTICS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (1 0 x 2 = 20)

1   Define statistics.
2   List the sources of Secondary data.
3   Name the measures of central tendency.
4   Define Standard deviation.
5   What are the types of correlation?
6   Write the two regression equations.
7   What are the types of errors?
8   Write the formula for single proportion test.
9   Mention any two uses of y^2 test.
10   Define degrees of freedom.

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

11 a Explain tabulation and its main parts.
                      OR
    b Outline the non probability sampling methods.

12 a State the merits and demerits of mean deviation.
                      OR
    b Find median for the following frequency distribution.

Marks:	0-20	20-40	40-60	60-80	80-100
No. of Students:	17	28	35	11	9

13 a Write the properties of correlation coefficient.
                      OR
    b Interpret the spearman rank correlation for the following data:

X:	48	36	25	58	61	23	38
Y:	51	32	36	21	42	28	48

14 a Write the hypothesis testing procedure.
                      OR
    b A random sample of 500 persons is found to have a mean of 4.5 cms. Can
       it be reasonably regarded as a sample from a large population, whose
       mean is 5cm and S.D is 2cm?

15 a The following table gives the classification of 100 workers according to
       sex and the nature of work. Test whether the nature of work is
       independent of the sex of the workers. (1%, 1 d.f - 6.64)

	Male	Female
Skilled	40	20
Unskilled	10	30

                      OR

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

16   What are the different methods of collecting primary data? Explain.

17   Calculate the mean and standard deviation from the following table giving the age distribution of 409 members.

Age:	20-30	30-40	40-50	50-60	60-70	70-80
No. of members:	30	61	132	110	51	25

18   Construct Y on X regression equation for the following data:

Marks in Maths:	25	28	35	32	31	36	29	38	34	32
Marks in Science:	43	46	49	41	36	32	31	30	33	39

19   A group of 7 patients treated with medicine 'A' weigh 35, 39, .40, 42, 51, 48, 60 kg. Another group of 9 patients from the same ward of a hospital treated with medicine 'B' weigh 53, 56, 60, 62, 67, 43, 64, 45, 54 kg. Do you agree with the claim that medicine 'B' increases the weight significantly? (5%, 14 d.f = 2.145)

20   Gain in weight of albino rats by four diets are given below:

Weight (gm) gain by albino rates

Diet	1	2	3	4	5
A	20	24	26	30	32
B	19	23	25	27	29
C	18	22	23	26	26
D	17	20	19	22	24

Test whether the diets differ significantly. [5%, (3,16)d.f 3.24]

Z-Z-Z   END