PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2019
(First Semester)

Branch – **VISUAL COMMUNICATION**

STATISTICS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10 x 2 = 20)

1   Give the structure of formation of a table.
2   State the types of bar charts.
3   What are the good characteristics of measures of central tendency?
4   Define mean deviation.
5   Why do you find correlation coefficient?
6   What are the uses of regression equations?
7   What do you understand by type I error?
8   State the statistical test procedure.
9   What is contingency table?
10   How do you define hypothesis in ANOVA for one way classification?

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

11 a   Explain about census and sampling methods.

OR

  b   Describe formation of frequency distribution.

12 a   Calculate mean and median for the following data.

15,12,5,13,12,15,1,15,9,8

OR

  b   Calculate mean deviation from mean for the following data.

100,150,200,250,360,490,500,600 671

13 a   Determine rank correlation coefficient between the two series X and Y given below.

X:	70	65	71	62	58	69	78	64
Y:	91	76	65	83	90	64	55	48

OR

  b   In a correlation study the following values are obtained:

Variables	X	Y
Mean	65	67
S.D	2.5	3.5

Correlation coefficient between X and Y is 0.8
Find the two regression equations.

14 a   An automatic machine fills in tea in sealed tins with mean weight of tea I kg and S.D I gm. A random sample of 50 tins was examined and it was found that their mean weight was 999.50 gms. Is the machine working properly?

OR

  b   A person threw 10 dice 500 times and obtained 2560 times 4,5,or 6. Can this be attributed to fluctuations is sampling?

15 a Five coins are tossed 256 times. The number of heads observed is given below. Examine if the coins are unbiased, by employing chi-square goodness of fit.

No. of Heads:	0	1	2	3	4	5
Frequency	5	35	75	84	45	12

OR

b Explain ANOVA table for one-way classification.

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

16 Describe diagrams and graphs.

17 From the price shares X and Y given below, State which share in more stable in value.

X:	55	54	52	53	56	58	52	50	51	49
Y:	108	107	105	105	106	107	104	103	104	101

18 Calculate correlation and regression coefficient from the following data:

X:	2	4	6	8	10	12	14
Y:	4	2	5	10	4	11	12

19 The lives of 12 cars manufactured by two companies A and B are given below in years.

A:	14	15	18	12	18	17	19	21	19	16	12	11
B:	21	18	14	22	23	19	20	16	16	13	20	14

Which company will you choose to purchase a car? Give reason.

20 Set up ANOVA table for the following per hectare yield for three varieties of wheat, each grown in four plots. Per hectare yield (in hundred kgs)

Plots of land	Variety of wheat		
	A	B	C
1	6	5	5
2	7	5	4
3	3	3	3
4	8	7	4

Test whether there is significant different among the average yields in the 3 varieties of wheat.

Z-Z-Z   END