

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2017
(First Semester)

Branch - **VISUAL COMMUNICATION (ELECTRONIC MEDIA)**

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 secondary data?
- 2 Define sampling.
- 3 What is mode?
- 4 What is meant by dispersion?
- 5 When to use rank correlation coefficient?
- 6 Define regression.
- 7 What is meant by hypothesis testing?
- 8 What is hypothesis?
- 9 Give the formula for test.
- 10 Define ANOVA.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a What are the role of tabulation?
OR
b Give the limitations of diagrams and graphs.
- 12 a Find the mean from the following: Blood serum cholesterol levels of 10 persons are as
240, 260, 290, 245, 255, 288, 272, 263, 277, 251.
OR
b Write the different between mean deviation and standard deviation.
- 13 a Calculate the coefficient of correlation from the following data

X:	1	2	3	4	5	6	7
Y:	9	8	10	12	11	13	14

 OR
 b Two ladies were asked to rank 7 different types of lipsticks. The Ranks given by them are as follows

Lipsticks	A	B	C	D	E	F	G
Meena	2	1	4	3	5	7	6
Lakshmi	1	3	2	4	5	6	7

 Calculate the spearman's rank correlation coefficient.
- 14 a To study the correlation between the stature of father and stature of son, a sample of 1,600 is taken from the universe of fathers and sons. The sample study gives the correlation between the two to be 0.80. Within what limits does it hold true for the universe?
OR
b Two laboratories A and B carry out independent estimates of fat content in ice-cream made by firm. A sample is taken from each batch, halved and the separated halves sent to the laboratories. The fat content obtained by the laboratories is recorded below

14 B Cont...

Batch No.	1	2	3	4	5	6	<i>i</i>	8	9	10
Lab A	7	8	7	3	8	6	9	4	7	8
Lab B	9	8	8	4	7	7	9	6	6	6

Is there is a significant difference between the mean fat content obtained by the two laboratories A and B?

15 a On the basis of information noted below, find out whether the new treatment is comparatively superior to the conventional one.

	Favorable	Non-favorable	Total
Conventional	40	70	110
New	60	30	90
Total	100	100	N = 200

OR

b From the table given below, whether the colour of son's eyes is associated with that of father's eyes.

	Eye colour in sons	
	Not Light	Light
Eye colour in father Not Light	230	148
Light	151	471

SECTION - C (30 Marks!)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Describe briefly about the type of classification of data.

17 Goals scored by two teams in a football sessions were as follows:

No. of Goals scored in a Football	No. of Football	Matches Played
	Team 'A'	Team 'B'
0	15	20
1	10	10
2	7	5
3	5	4
4	3	2
5	2	1
Total	42	42

Do you conclude that Team 'A' is consistent?

18 Find the correlation coefficient from the following data.

X:	65	66	67	67	68	69	70	72
Y:	67	68	65	68	72	72	69	71

19 A test on two groups of boys and girls gave the following results.

	Mean	S.D.	N
Boys	45	3	150
Girls	72	5	100

Do you conclude that the marks scored by girls are more than boys at 0.05 level of significance?

20 Three samples below have been obtained from normal population with equal variances Test the hypothesis that the sample means are equal.

Samples		
8	7	12
10	5	19
7	10	13
14	9	12
11	9	14