

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**BSc DEGREE EXAMINATION DECEMBER 2018**  
(First Semester)

Branch - **STATISTICS**

**DESCRIPTIVE STATISTICS**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks

(10 x 1 = 10)

- 1 The column headings of a table are known as
  - (i) subtitles
  - (ii) stubs
  - (iii) reference notes
  - (iv) captions
- 2 Pie chart represents the components of a factor by
  - (i) Percentages
  - (ii) angles
  - (iii) sectors
  - (iv) circles
- 3 Sum of the deviations about Mean is
  - (i) Zero
  - (ii) Minimum
  - (iii) Maximum
  - (iv) One
- 4 The median of the variate values 11,7,6,9,12,15,19 is
  - (i) 9
  - (ii) 12
  - (iii) 15
  - (iv) 11
- 5 Moments about origin zero are called
  - (i) Raw moments
  - (ii) Central moments
  - (iii) Relative moments
  - (iv) All the above
- 6 If the coefficient of Kurtosis  $y^9$  of a distribution is zero, the frequency curve is
  - (i) leptokurtic
  - (ii) platykurtic
  - (iii) mesokurtic
  - (iv) any of the above
- 7 The range of simple correlation coefficient is
  - (i) 0 to  $\infty$
  - (ii)  $-\infty$  to  $\infty$
  - (iii) 0 to 1
  - (iv) -1 to 1
- 8 Regression coefficient is independent of change of
  - (i) Origin
  - (ii) Scale
  - (iii) both origin and scale
  - (iv) neither origin nor scale
- 9 The equation  $y=ab^x$  represents
  - (i) compertz curve
  - (ii) exponential curve
  - (iii) logarithmic curve
  - (iv) None of these
- 10 The delete key of the keyboard is assigned to which command in Excel
  - (i) Edit»clear»contents
  - (ii) Edit»clear»all
  - (iii) Edit»delete
  - (iv) All of above

**SECTION-B (25 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Construct a sub-divided bar diagrams from the following data:

**Number of Students**

! College	Art	Science	Commerce	Agriculture	Total
A	1200	800	60	400	3000
B	750	500	300	450	2000

OR

11 b Explain the characteristics of a good questionnaire.

12 a Write down the merits and demerits of Geometric Mean.

OR

b Obtain the value of Median from the following data:  
391,384,591,407,672,522,777,753,2488,1490.

13 a Explain the measures of Kurtosis.

OR

b Calculate Karl Pearsons co-efficient of Skewness from the following data.  
25,15,23,40,27,25,23,25,20.

14 a Explain the properties of Correlation Coefficient.

OR

b Calculate Spearman's Rank correlation co-efficient for the given data:

I Ranks of X	1	6	3	9	5	1	2	7	10	1	8	4
Ranks of Y	6	8	3	7	2	1	1	5	9	4		10

15 a Write about formulae in MS Excel.

OR

b How do we start or open Excel screen and the parts of a Excel screen.

### SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

16 a Draw a suitable diagram for the following data:

Item	Family A	Family B
Food	240	300
Clothing	160	300
Rent	80	200
Others	200	400

OR

b Describe the various parts of a Table.

17 a Calculate mode from the following data:

ci	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	5			12	28	20	10

OR

b Compute coefficient of variation from the following data:

X	10	20	30	40	50	60
Frequency	8	12	20	10	7	2

18 a Calculate the first four moments about the mean of the following distribution.

X	0	2	3	4	5	6	7	8
f	1	8	56	70	56	28	8	1

OR

b Explain the relative measures of Skewness.

19 a Calculate correlation coefficient from the following data showing heights (in inches) of fathers(x) and their sons(y).

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

OR

b Write the differences between correlation and regression.

20 a From the following data fit a straight line using the method of least squares

Year	1993	1994	1995	1996	1997	1998	1999
	100	110	120	130	140	150	160