# PSG COLLEGE OF ARTS & SCIENCE
## (AUTONOMOUS)
### BCom(CS) / BCom DEGREE EXAMINATION MAY 2018
### (Second Semester)

Common to Branches – **CORPORATE SECRETARYSHIP / COMMERCE**

## STATISTICS

Time : Three Hours                                    Maximum : 75 Marks

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

1   Define statistics.

2   Give any two sources of secondary data.

3   What is simple random sample?

4   What is simple bar diagram?

5   Find median: 70, 60, 75, 90, 95, 80, 42, 65, 72.

6   Define standard deviation.

7   What is Bowley's coefficient of Skewness?

8   Write down the formula for finding rank correlation.

9   Give any two methods of finding unweighted index numbers.

10   Define cost of living index.

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

11  a   Briefly explain the functions of statistics.

OR

   b   Briefly explain the uses and limitations of statistics.

12  a   Explain briefly about stratified sampling.

OR

   b   Draw a pie diagram to represent the following population in a town.

| Males | Females | Girls | Boys | Total |
|-------|---------|-------|------|-------|
| 2000 | 1800 | 4200 | 2000 | 10,000 |

13  a   Calculate mode

| x : | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|-----|----|----|----|----|----|----|----|
| f : | 7 | 11 | 17 | 15 | 14 | 10 | 11 |

OR

   b   Calculate standard deviation for the following data.
9, 27, 18, 54, 45, 72, 36, 63, 81.

14  a   Describe briefly about Skewness.

OR

   b   Calculate Karl Pearson co-efficient of correlation.

| x : | 60 | 63 | 65 | 64 | 68 |
|-----|----|----|----|----|----|
| y : | 50 | 53 | 60 | 67 | 70 |

15 a Construct an index for 1995 taking 1994 as base by average of relatives method using arithmetic mean.

| Commodities : | A | B | C | D | E |
|---|---|---|---|---|---|
| Price in '94 : | 100 | 80 | 160 | 220 | 40 |
| Price in '95 : | 140 | 120 | 180 | 240 | 40 |

OR

b From the chain base index numbers given below prepare fixed base index numbers

| Year : | 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|---|
| CB Index : | 100 | 130 | 140 | 110 | 160 |

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

16 Explain the methods of collecting primary data.

17 Determine the median for the following data graphically.

| Weight (in kg) : | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 |
|---|---|---|---|---|---|
| Students : | 6 | 8 | 12 | 9 | 5 |

18 Find mean, median and mode for the following data.

| C I : | 3-4 | 4-5 | 5-6 | 6-7 | 7-8 | 8-9 | 9-10 |
|---|---|---|---|---|---|---|---|
| f : | 83 | 27 | 25 | 50 | 75 | 38 | 18 |

19 Calculate Karl Pearson's coefficient of Skewness from the data given below:

| x : | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| f : | 10 | 18 | 30 | 25 | 12 | 3 | 2 |

20 Construct Laspeyre's, Paasshe's and Fisher's Ideal Index numbers for the given data.

| Commodities | 1984 | | 1985 | |
|---|---|---|---|---|
| | Price | Quantity | Price | Quantity |
| A | 4 | 8 | 8 | 6 |
| B | 10 | 10 | 12 | 5 |
| C | 8 | 14 | 10 | 10 |
| D | 4 | 19 | 4 | 13 |

Z-Z-Z                    END