

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**BCom (CS) DEGREE EXAMINATION MAY 2019**  
(Second Semester)

Branch - **CORPORATE SECRETARYSHIP**

**STATISTICS**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (IQ Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10 x 1 = 10)

- 1 The data collected by questionnaires are  
(i) primary data (ii) secondary data (iii) published data (iv) grouped data
- 2 Statistics can  
(i) prove anything (ii) disprove anything  
(iii) neither prove nor disprove anything, is just a tool (iv) none of these
- 3 Classification is the process of arranging data in  
(i) Columns (ii) Rows  
(iii) Columns and Rows (iv) Group according to the common characteristics
- 4 When an item of expenditure is 20% of the total expenditure, the angle of the sector in the pie diagram is  
(i) 20 degrees (ii) 40 degrees (iii) 60 degrees (iv) 72 degrees
- 5 The measure of central tendency affected most by the extreme values is  
(i) Mean (ii) Median (iii) Mode (iv) Range
- 6 Second quartile is nothing but  
(i) Mode (ii) Mean (iii) Median (iv) Quartile Deviation
- 7 In a symmetrical distribution,  
(i) Mean=Median=Mode (ii) Mean>Median>Mode  
(iii) Mean<Median<Mode (iv) None of these
- 8 If one of the regression co-efficient is negative, the other  
(i) must be negative (ii) must be positive  
(iii) may be positive or negative (iv) equal to zero
- 9 The best average to calculate Index numbers is  
(i) A.M (ii) G.M (iii) Mode (iv) Median
- 10 The current year quantities are taken as weights in  
(i) Bowley's formula (ii) Laspeyre's formula  
(iii) Paasche's formula (iv) None of these

**SECTION - B (25 Marks)**

Answer **ALL** questions

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

- 11 a Explain the functions of Statistics.

OR

- b Explain the characteristics of a good questionnaire.

- 12 a Explain the main parts of a table.

OR

- b Draw a suitable diagram from the following data.

Year	Sales ('000 Rs.)	Gross Profit ('000 Rs.)	Net Profit ('000)
2015	120	40	20
2016	135	45	30
2017	140	55	35
2018	150	60	40

- 13 a From the following data, calculate arithmetic mean.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	5	10	25	30	20	10

OR

- b Calculate Quartile deviation and its co-efficient of Quartile Deviation.

Marks 1H OA m an cn ^

Calculate Karl Pearson's co-efficient of Skewness for the following data.

Wage per item (Rs.)	i	12	15	20	25	30	40	i	50
No. of items	j	o	25	40	70	32	13	•	L10-J

OR

b State the differences between correlation and regression.

15 a From the following data construct an index for 2015 taking 2014 as base by using unweighted averages of relatives method.

Commodities	A	B	C	D	E
Price in 2014 (Rs.)	50	40	80	110	20
Price in 2015 (Rs.)	70	60	90	120	20

OR

b Construct fixed base and chain base index numbers from the following data:

Year	2010	2011	2012	2013	2014	2015
Price (Rs.)	25	28	35	40	50	60

**SECTION -C (40 Marks!)**

Answer ALL questions

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

16 a Explain the method of collecting primary data.

OR

b Explain the method of collecting secondary data and distinguish between primary and secondary data.

17 a Explain the types of classification with suitable example.

OR

b

Marks	0-7	8-15	16-23	24-31	32-39	40-47
No. of Students	4	10	13	20	11	2

Draw less than ogive and find (i) First quartile (ii) Median (iii) Third Quartile

18 a Calculate the median and mode from the following data:

Central Value	45	55	65	75	85	95	105
Frequency	32	65	128	167	163	79	L 43

OR

b Calculate the standard deviation of the following frequency distribution.

Annual Profit (Rs. Crores)	20-40	40-60	60-80	80-100	100-120	120-140	140-160
No. of Banks	10	14	25	48	33	24	16

19 a Marks obtained by 8 students in Accountancy (X) and Statistics (Y) are given below. Calculate rank correlation.

X	15	20	28	12	40	60	20	80
Y	40	30	50	30	20	10	30	60

OR

b From the following data, calculate the two regression equations.

Price (Rs.) (X)	10	12	13	12	16	15
Amount Demanded (Y)	40	38	43	45	37	43

Also estimate X when Y=20.

20 a Construct index numbers of price from the following data by applying (i) Laspeyre's method (ii) Paasche's method (iii) Fisher's method.

Commodity	2016		2015	
	Price	Quantity	Price	Quantity
A	4	6	2	8
B	6	5	5	10
C	5	10	4	14
D	2	13	2	19

OR

b Calculate the cost of living index number using Family Budget method.

Commodity	A	B	C	D	E	F	G	H
Quantity in Base Year (units)	200	50	50	20	40	50	60	40