

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BA DEGREE EXAMINATION MAY 2022  
(Third Semester)

Branch – SOCIOLOGY

SOCIAL STATISTICS - I WITH COMPUTER APPLICATIONS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

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

- The final stage in function of statistics is  
a) collection      b) Interpretation      c) Tabulation      d) Analysis
- The data collected from published report is known as \_\_\_\_\_ data  
a) secondary      b) consistent      c) error      d) primary
- The number of observations corresponding to a particular class is known as the \_\_\_\_\_ of the class.  
a) frequency      b) variable      c) median      d) mode
- Two or more sets of interrelated data are represented by  
a) Bar diagram      b) Multiple bar diagram      c) Percentage bar diagram  
d) Sub-divided
- If the grouped data has open end classes, one cannot calculate  
a) Median      b) Mode      c) Quartile      d) Mean
- If for values of  $X, A.M.=25, H.M=9$  then  $G.M$  is  
a) 2.5      b) 1.5      c) 15      d) 25
- If  $\beta_2 < 3$  then the distribution is  
a) Platykurtic      b) Mesokurtic      c) Leptokurtic      d) Normal
- The range of partial correlation coefficient is  
a) 0 to 1      b) 0 to  $\infty$       c)  $-\infty$  to  $\infty$       d) -1 to 1
- Excel is a program that is used to prepare a  
a) slide presentations      b) Spread sheet      c) Text document      d) data base
- \_\_\_\_\_ is the function in MS excel used to find mean of a given distribution  
a) SUM      b) SUMIF      c) AVERAGE      d) STDEV. P

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11. a. Explain the sources of collecting secondary data in detail.

OR

- b. Define statistics, mention its limitations.

12. a. The following are the marks of 50 students in statistics. Construct a suitable frequency table :

28	17	48	57	38	59	28	16	78	46
45	86	21	29	49	61	71	46	49	30
76	37	76	36	37	39	46	27	29	31
21	49	29	8	56	46	5	36	71	42
46	56	16	15	22	35	18	22	46	17

OR

Cont...

2. b. Draw multiple bar diagram for the following data:

year	sales('000 Rs.)	Gross Profit('000 Rs)	Net Profit('000 Rs)
2007	120	40	20
2008	135	45	30
2009	140	55	35
2010	150	60	40

13. a. Calculate mean and median for the given data:

Class interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	8	15	22	20	10	5

OR

- b. A consignment of 180 articles is classified according to the size of the article as under. Find the coefficient of standard deviation:

Measurement	0-10	10-20	20-30	30-40	40-50
No of articles	4	6	20	40	45
Measurement	50-60	60-70	70-80	80-90	
No of articles	31	20	9	5	

14. a. Calculate the coefficient of correlation from the following data by rank correlation method:

Price of tea(Rs.)	75	88	95	70	60	80	81	50
Price of coffee(Rs.)	120	134	150	115	110	140	142	100

OR

- b. The following table gives the height and weight of 10 students aged 18 years selected by random sampling from a population.

Height(inches)	61	68	68	64	65	70	63	62	64	67
Weight(pounds)	112	123	130	115	110	125	100	113	116	123

- (i) Calculate the line of regression of weights based on heights.  
(ii) Calculate the weight of a student whose height is 69".

15. Write the procedure for preparation of table and questionnaire using MS excel.

OR

Write down the procedure to calculate quartile deviation using MS excel.

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

16. Explain functions of statistics in detail.

17. Draw less than ogive and more than ogive from the data given bellow, also find its median :

Profit (in lakhs)	10-20	20-30	30-40	40-50	50-60
Number of Cos.	6	8	12	18	25
Profit (in lakhs)	60-70	70-80	80-90	90-100	
Number of Cos.	16	8	5	2	

Cont...

18. Calculate the arithmetic mean, geometric mean and harmonic mean for the given data:

Marks	4-8	8-12	12-16	16-20	20-24
Frequency	6	10	18	30	15
Marks	24-28	28-32	32-36	36-40	
Frequency	12	10	6	2	

19. Calculate Bowley's coefficient of skewness from the data given below:

Profits (in lakhs)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Number of Companies.	8	12	20	10	6	3	1

20. Calculate correlation between X and Y using MS excel:

X	9	8	7	6	5	4	3	2	1
Y	15	16	14	13	11	12	10	8	9

Z-Z-Z

END