

STELLA MARIS COLLEGE (AUTNOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2008 – 2009 & thereafter)

SUBJECT CODE: SC/MC/SS 44

B.A. DEGREE EXAMINATIONS, APRIL 2012
BRANCH III – SOCIOLOGY
FOURTH SEMESTER

COURSE : MAJOR – CORE
PAPER : SOCIAL STATISTICS
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS. EACH ANSWER NOT TO EXCEED 50 WORDS **(10 x 2 = 20)**

1. What is Social Statistic?
2. Define measurement.
3. Distinguish between discrete and continuous series.
4. Mention the different types of tables.
5. Find the range and its co-efficient of range for the data given below.
3 6 9 2 8 1 5 7 4.
6. Find out the combined Arithmetic mean for the following:
 $N_1 = 600$ $N_2 = 500$
 $\bar{X}_1 = 172$ $\bar{X}_2 = 186$
7. Write down the formula for calculating correlation for assumed mean method.
8. What is meant by spurious correlation?
9. What are the two regression lines?
10. Given $X = 0.91Y - 41.35$, find the value of X when $Y = 75$

SECTION - B

ANSWER ANY FIVE QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS: **(5 x 8 = 40)**

11. Describe with example any four functions of social statistics.
12. Discuss the various scales of measurement with suitable examples
13. Draw a blank table and name its parts.
14. Draw a Histogram for the following data:
- | | | | | | | | |
|------------|------|-------|-------|-------|-------|-------|-------|
| Class : | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| Frequency: | 6 | 8 | 10 | 15 | 13 | 8 | 5 |
15. A study of the profit earned by 40 firms in an automobile industry in the first quarter of 2010 revealed the following information. Estimate the average profit earned.
- | | | | | | | |
|-----------------------|-------|-------|-------|-------|-------|-------|
| Profit (in lakh Rs.): | 10-15 | 15-20 | 20-25 | 25-30 | 30-35 | 40-45 |
| No. of Firms: | 6 | 7 | 14 | 4 | 5 | 4 |
16. Calculate Mean deviation from the mean for the following data:
- | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|
| Marks | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| No. of Students | 6 | 5 | 8 | 15 | 7 | 6 | 3 |
17. What is a scatter diagram? How does it help in studying correlation between two variables in respect of their nature and intent?
18. Given the following information obtain the two regression equations:

	X	Y
Arithmetic Mean	47	96
Variance	64	81
Correlation coefficient	0.36	

SECTION – C**ANSWER ANY TWO QUESTIONS:****(2 x 20 = 40)**

19. (a) Given below are the weekly wages, in rupees, of 60 workers in a factory, manufacturing toys:

23	48	51	64	72	82	56	33	50	42
35	88	77	65	39	52	48	64	49	57
41	72	62	49	32	54	67	46	55	50
82	44	75	56	51	63	59	59	53	42
75	85	68	55	52	45	42	57	20	57
46	61	50	16	62	56	64	40	55	71

From the frequency distribution, taking the lowest class interval 10-20.

- (b) Draw up a blank table to show the number of employees in a large commercial firm classified according to (i) Sex: Male and female (ii) Three age groups: below 30, between 30 and 45 and above 45 (iii) Four income groups: Below Rs. 4000. 4000-7500. 7500-10000 and above 10000.

20. (a) What are the measures of Dispersion? Examine the qualities of standard deviation as a measure of dispersion.

- (b) Calculate the standard deviation from the following Data:

Value	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Frequency	2	8	6	12	7	6	4	3	1	1

21. a. What is correlation and what are different methods of studying correlation?
b. Compute the correlation coefficient for the following data.

Fertilisers Used (tones)	15	18	20	24	30	35	42	50
Productivity (tones)	85	93	95	105	120	130	150	160

22. From the data given below. Find (i) the two regression equations (ii) the coefficient of correlation between marks in sociology and statistics (iii) The most likely mark in statistics when the marks in sociology is 30.

Marks in sociology	25	28	35	32	31	36	29	38	34	32
Marks in Statistics	43	46	49	41	36	32	31	30	33	39
