

2009

**SOCIOLOGY**

PAPER—SOC - 1204

*Full Marks : 40*

*Time : 2 hours*

*The figures in the right-hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

*Illustrate the answers wherever necessary*

**GROUP—A**

**[Marks: 20]**

1. Answer any *one* of the following : 10 × 1

(a) (i) What is central tendency?

(ii) The mean age of a combined group of 50 workers, among whom 30 are males, is 30 years. The mean age of the female workers is 27 years. Find out the mean age of the male workers.

4 + 6

(Turn Over)

(b) (i) Find out the missing frequencies. It is known that  $\bar{X} = 25.04$ .

<u>Age (yrs)</u>	<u>No. of Persons</u>
15—19	37
20—24	$f_1$
25—29	43
30—34	$f_2$
35—44	9
45—59	6
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	$N = 200$

(ii) Graphically represent the above data. 6 + 4

2. Answer any *two* of the following : 5 × 2

(a) Represent the following statistical information Graphically :

Year : 2000 2001 2002 2003 2004 2005 2006

Monthly

Average

Production

(Tons) : 609 522 205 608 551 632 516

(b) Find out Standard Deviation of the combined Group.

$$n_1 = 50 \quad n_2 = 75$$

$$\bar{X}_1 = 112.5 \quad \bar{X}_2 = 225.97$$

$$\sigma_1 = 3.97 \quad \sigma_2 = 4.51$$

(c) Find out Median :

<u>X</u>	<u>f</u>
10—15	225
16—21	199
22—27	314
28—33	408
34—39	45
40—45	96

## GROUP—B

[ Marks : 20 ]

3. Answer any *one* of the following : 10 × 1

(a) A random sample of 200 students in a college were asked the question "Do you think scientists are slightly imbalanced people?" The number of students of each class saying "yes" and "no" are :

		<u>Class in College</u>		
		1st year	2nd year	3rd year
Yes	15	8	5	2
No	55	42	35	38

Test whether there is any association between opinion and class in college. (Given  $\chi^2$  at 5% level of significance is 7.81 for 3 df ).

(b) (i) Define Correlation.

(ii) The ranks given by two teachers to the students in an examination is given below.

Find out Rank Correlation.

3 + 7

Candidates	Rank given by Rambabu	Rank given by Shyambabu
1	3	1
2	2	3
3	1	2
4	4	5
5	7	4
6	6	7
7	5	6
8	8	8

Answer any two of the following :

5 × 2

(a) (i) Distinguish between Variable and Attribute.

(ii) Classify the following as either attribute or a discrete variable or a continuous variable.

- \* Family size —
- \* Mother Tongue —
- \* Division obtained by a student —
- \* Family Income.

3 + 2

(b) Find out  $Q_1$ ,  $Q_2$  and  $Q_3$  from the following data.

<u>Age</u>	<u>f</u>
10—15	10
15—20	15
20—25	12
25—30	35
30—35	17
35—40	15

(c) Find out correlation co-efficient.

<u>X</u>	<u>Y</u>
12	26
7	28
13	39
15	46
10	35
17	36