B K BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
POST MID-TERM (2024-25)
ECONOMICS (030)
CLASS XI
MARKING SCHEME

1. a) Both statements are true. 1)
2. b) Secondary data 1)
3. a) Columns 1)

4. b) Both Assertion (A) and Reason (R) is true but Reason (R) is not the correct explanation of Assertion (A). 1)

5. c) both (a) and (b) 1)

6. Ans. Information collected is an example of primary data. 2)
   Features of primary data are as follows:
   a) Data are collected by the investigator for his own purpose for the first time.
   b) This is the first- hand information.
   c) They are original because information is collected from the source of origin.
   d) It is costly in terms of time, efforts and money. (Any Two)

7. A good sample should have the following characteristics: 2)
   i. Representative: The sample should be a miniature or replica of the population it's drawn from. It should accurately represent the population by including all types of units in fair proportions.
   ii. Adequate: The sample should contain enough cases to ensure reliable results. The sample size should be large enough to provide statistical stability and accuracy.
   iii. Goal-oriented: The sample should be fit to the research objectives and the survey and data collection process.
   iv. Economical: The sample should achieve objectives with minimum cost and effort.
   v. Randomly selected: Any item should have an equal chance of being selected.
   vi. Homogeneous: All selected samples should be homogeneous to each other and not contradictory.
   vii. Free from bias: The sample should be free from systematic bias (Any Two)

8. 2)

Class Interval	Tally Bars	Frequency
0 -10	lllll	5
10- 20	lllll	5
20- 30	ll	2
30-40	llll	4
40- 50	llll	4

9.   4)

$$r = \frac{\sum x'y' - \left(\dfrac{\sum x' \times \sum y'}{N}\right)}{\sqrt{\sum x'^2 - \dfrac{(\sum x')^2}{N}} \times \sqrt{\sum y'^2 - \dfrac{(\sum y')^2}{N}}}$$

$$= \frac{20 - \left(\dfrac{-5 \times -10}{5}\right)}{\sqrt{15 - \dfrac{(-5)^2}{5}} \times \sqrt{30 - \dfrac{(-10)^2}{5}}}$$

$$= \frac{20 - 10}{\sqrt{15 - 5} \times \sqrt{30 - 20}} = \frac{10}{\sqrt{10 \times 10}} = \frac{10}{10} = 1$$

10.   4)

• Series X has the value 35 both at the 4th and 5th ranks. Hence both are given the average rank, i.e

$$\frac{4+5}{2} = \frac{9}{2} = 4.5$$

Hence there is one set of repeated ranks

In series X: $m_1 = 2$ (35 repeated twice, so $m_1 = 2$)

$$r_k = 1 - \frac{6\left[\sum D^2 + \dfrac{1}{12}(m_1^3 - m_1)\right]}{N^3 - N}$$

$$= 1 - \frac{6\left[65.5 + \dfrac{1}{12}(2^3 - 2)\right]}{8^3 - 8}$$

$$= 1 - \frac{6(65.5 + .5)}{504} = 1 - \frac{6 \times 66}{504} = 1 - \frac{396}{504}$$

$$= 1 - 0.786 = 0.214$$

There is low degree of positive correlation between series X and series Y.

11.(a)   3)

Table No.
Population of India according to workers and non-workers by gender and location, 2001
(Crore)

Location	Gender	Workers			Non-worker	Total
		Main	Marginal	Total		
Rural	Male	17	3	20	18	38
	Female	6	5	11	25	36
	Total	23	8	31	43	74
Urban	Male	7	1	8	7	15
	Female	1	0	1	12	13
	Total	8	1	9	19	28
All	Male	24	4	28	25	53
	Female	7	5	12	37	49
	Total	31	9	40	62	102

Source. Census of India 2001

Note. Figures are rounded to nearest crore

(b)   3)

BASIS FOR COMPARISON	CENSUS	SAMPLING
Meaning	A systematic method that collects and records the data about the members of the population is called Census.	Sampling refers to a portion of the population selected to represent the entire group, in all its characteristics.
Enumeration	Complete	Partial
Study of	Each and every unit of the population.	Only a handful of units of the population.
Time required	It is a time-consuming process.	It is a fast process.
Cost	Expensive method	Economical method
Results	Reliable and accurate	Less reliable and accurate, due to the margin of error in the data collected.
Error	Not present.	Depends on the size of the population

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