

23. Elaborate on various methods of studying variations by explaining its merits and limitations.
24. Explain the different sampling methods adopted in social science research with examples.

NOVEMBER 2023

72241/BB33A

Time : Three hours

Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions:

1. Define mode.
2. State the sources of secondary data.
3. List out the different types of diagrams.
4. What is mean deviation?
5. State the formula to measure Karl Pearson's Coefficient of skewness.
6. What do you mean by coefficient of determination?
7. Define seasonal variation.
8. State any two limitations of graphic method of determining trend.
9. What are the needs of consumer price index?
10. Write down the uses of C-Chart.
11. What do you understand by unrestricted random sampling?
12. What is sampling error?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Discuss in detail about different types of averages used in business statistics.

14. Draw a pie diagram for the following data.

Sectors	Percentage
Agriculture and Rural Development	12.9
Irrigation	12.5
Energy	27.2
Industry and Minerals	15.4
Transport, Communication, etc.	15.9
Social service and others	16.1

15. Discuss the different types of data available in social science research and explain the modes of collecting those data

16. Find the median and mean deviation of the following data:

Size	Frequency	Size	Frequency
0-10	7	40-50	16
10-20	12	50-60	14
20-30	18	60-70	8
30-40	25		

17. Outline the elements of time series with examples.
18. Discuss the method of constructing consumer price index.
19. Explain the advantages and disadvantages of census and sample methods. Discuss the essentials of sampling.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Calculate Karl Pearson's Coefficient of correlation from the following data and interpret its value:

Roll no. of students :	1	2	3	4	5
Marks in Accountancy	48	35	17	23	47
Marks in Statistics	45	20	40	25	45

21. Discuss the different methods of constructing index numbers.
22. Fit a straight-line trend for the following series using the method of least square. Estimate the value for 2014.

Year	2007	2008	2009	2010	2011	2012	2013
Production of Steel (m. tonnes)	60	72	75	65	80	85	95