23. Explain how cost of living index numbers are constructed. What are their uses?

24. Describe systematic sampling method with an example. Discuss its merits and demerits.

Time : Three hours   Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. State any two nature of statistical methods.

2. Define tabulation of data.

3. What are the measures of location?

4. State the different methods for measuring dispersion.

5. What are the types of Kurtosis?

6. Distinguish between the positive correlation and negative correlation.

7. Write the different components of Time series Analysis.

8. What are seasonal variations?

9. What is the advantages of weighting on index number?

10. What do you mean by statistical quality control?

11. What are the advantages of Random sampling?

12. State any two merits of Stratified sampling.

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PART B — (5 × 5 = 25 marks)

Answer any FIVE questions.

13. Draw a histogram and frequency curve for the data given below:

Size:	30-40	40-50	50-60	60-70	70-80
Frequency:	3	5	12	8	2

14. Explain the properties of Arithmetic mean.

15. Compute coefficient of Quartile deviation from the following data.

Marks:	10	20	30	40	50	60
Number of Students:	6	9	15	8	7	5

16. Explain scatter diagram method of finding correlation.

17. How do you calculate 4 year moving Average? Give an example.

18. Explain the uses of index numbers.

19. State the advantages and disadvantages of sampling over complete census.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

20. Describe various diagrammatic representation o data with examples.

21. The data given below shows the gains in height (in cms) and weights (in kgs) of eight children du to a new diet program. Compute karl pearson i coefficient correlation between height and weight.

Height: 2.0 3.5 3.0 5.0 2.1 2.5 3.6 3.8

weight: 1.0 3.0 2.5 4.5 1.5 2.0 3.1 4.1

22. Fit a straight line trend by the method of least squares to the following data and calculate trend values. Also estimate the sales for the year 2020.

Year: 2011 2012 2013 2014 2015 2016 2017

Sales: 12   15   16   18   21   22   24
(Rs.'000)