

NOVEMBER 2012

56612/MCMB

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer any TEN questions.

All questions carry equal marks.

Each answer should not exceed 50 words.

Define/Explain the following :

1. Secondary data.
2. Sample.
3. Frequency distribution.
4. Correlation.
5. Negative association.
6. Independent events.
7. Multiplication theorem.
8. Alternative hypothesis.
9. Degrees of freedom.

10. Specific fertility rate.
11. Cartogram.
12. Harmonic Mean.

PART B — ($5 \times 5 = 25$ marks)

Answer any FIVE questions.

All questions carry equal marks.

Each answer should not exceed 200 words.

13. Write short note on the collection of secondary data.
14. Give a detail account on the classification of data and their types with example.
15. Distinguish between diagrammatic and graphic representation.
16. Explain the difference between the measures of central tendency and measure of dispersion.
17. Give a short note on skewness and kurtosis.
18. Define regression, regression line and regression equation.
19. Explain the uses of 't' test in biology and its advantages.

PART C — ($4 \times 10 = 40$ marks)

Answer any FOUR questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

20. Calculate the Arithmetic mean and median for the given data :

Weight of fish : 0–10 10–20 20–30 30–40 40–50

No. of fishes : 8 10 15 11 6

21. Find out the correlation coefficient for the following data :

Length of leaves : 12 18 16 15 12 10 20 17

Number of leaves : 6 10 9 8 9 8 12 10

22. Fish samples collected from two polluted sites, test whether there is a significant difference in the tissue protein level between the two samples (10 df. at 5% L.S. the table value 2.23)

A 13 16 12 17 15 15 17

B 9 11 15 11 14

23. Test the data against the hypothesis using Chi-square test :

Red Eyed drossophila - 148

White eyed drossophila - 22

(1 df at 5% L.S. χ^2 table value = 3.84).

24. From the following data, obtain the regression equation of X and Y series :

X : 2 4 6 8 10

Y : 5 7 9 8 11

25. Write an account on mortality and the methods of determining population density and growth.
