

NOVEMBER 2013

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. Discrete variable.
2. Round off to two digits 18.2536.
3. Give the value of 10^4 .
4. Geographical classification.
5. Simple bar diagram.
6. Harmonic mean.
7. Positive correlation.
8. Probability.
9. Alternate hypothesis.

10. Population density.
11. Crude birth rate.
12. Accuracy.

PART B — ($5 \times 5 = 25$ marks)

Answer any FIVE questions

All questions carry equal marks.

Each answer should not exceed 200 words.

13. Describe any two derived variables with examples.
14. Give the abbreviations of any five common units of measurement.
15. With an illustration explain the construction of a histogram.
16. What is multiplication rule of probability, explain with an example?
17. With an assumed data explain confidence interval and degrees of freedom.
18. Discuss the types of correlation with examples.
19. Describe the calculation of Natality and its types.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions.

All questions carry equal marks.

Each answer should not exceed 500 words.

20. Illustrate and explain any five diagrammatic and graphical representation of data.
21. Calculate the Arithmetic Mean of the given data.
 Marks : 0-10 10-20 20-30 30-40 40-50 50-60
 Number of Students : 8 15 22 20 10 5
22. Calculate the coefficient of correlation between X and Y variables.
 X 78 89 99 60 59 79 68 61
 Y 125 137 156 112 107 136 123 108
23. Obtain the two regression equations of the given data.
 X 1 2 3 4 5 6 7 8 9
 Y 9 8 10 12 11 13 14 16 5
24. In a survey of 200 boys of which 75 were intelligent, 40 had educated fathers; while 85 of the unintelligent boys had uneducated fathers. Do these figures support the hypothesis that educated fathers have intelligent boys? ($\chi^2_{0.05} = 3.84$)
25. Discuss the types of Mortality rate and its calculations and importance.