

APRIL 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. Qualitative variable.
2. Round off two digits 7.3684.
3. Give the value of  $10^{-3}$ .
4. Chronological classification.
5. Cartogram.
6. Range.
7. Mutually Exclusive event.
8. Null hypothesis.
9. Linear correlation.
10. Infant mortality rate.
11. Harmonic mean.
12. Discrete series.

PART B — ( $5 \times 5 = 25$  marks)

Answer any FIVE questions.

All questions carry equal marks.

Each answer should not exceed 200 words.

13. Illustrate continuous variable.
14. Give the abbreviations of common units of measurement.
15. With an illustration explain the construction of a pie diagram.
16. Define geometric mean and its uses.
17. Explain addition of rule of probability.
18. What is a standard error, how it is calculated?
19. Illustrate and explain scatter diagram and its uses.

PART C — ( $4 \times 10 = 40$  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 arithmetic mean for the following data :  
Marks :                    0-10 10-20 20-30 30-40 40-50 50-60  
Number of student :     5     10     25     30     20     10
22. Making use of the given data, calculate Karl Pearson's coefficient of correlation.  
X variable : 10 6 9 10 12 13 11 9  
Y variable : 9 4 6 9 11 13 8 4
23. From the following data obtain the two regression equations.  
              X 6 2 10 4 8  
              Y 9 11 5 8 7
24. In an experiment on pea-breeding Mendel obtained the following frequencies of seed, 315 round and yellow, 101 wrinkled and yellow, 108 round and green, 32 wrinkled and green. Is the result obeys Mendel's ratio of 9:3:3:1.
25. Describe the patterns of population growth and any two methods of estimating the density of populations.
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