

NOVEMBER 2015

56612/MCMB

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer any TEN questions each in 50 words.

Define/Explain the following :

1. Quantitative variable.
2. Round off to two digits 10.1275.
3. Give the value of 10^{-5} .
4. Exclusive class.
5. Cartogram.
6. Degrees of freedom.
7. Negative correlation.
8. Crude death rate.
9. Geometric mean.
10. Median.
11. Population density.
12. Frequency polygon.

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions each in 200 words.

13. Explain any two derived variables with illustrations.
14. Explain chronological and geographical classifications with examples.
15. Explain the construction of a pie diagram with an assumed data.
16. Explain median and give the formula for calculating it for a discrete and continuous data.
17. Describe mean deviation of Arithmetic mean as a measure of deviation.
18. Write the addition or multiplication rule of probability and its application with an example.
19. What is a scatter diagram, illustrate and explain its types.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions each in 500 words.

20. With illustrations explain any five diagrammatic and graphical representation of data.
21. Calculate Arithmetic mean for the given data :

Age :	16-20	21-25	26-30	31-35	36-40	41-45	46-50
Number of persons :	12	25	31	42	36	24	30

22. From the following table test whether the colour of the son's eye is associated with that of the father.
 $(\chi^2_{0.05(1)} = 3.84)$

Eye colour of Father	Eye colour of Son	
	Blue	Black
Blue	203	175
Black	178	444

23. The following data gives the yield of maize in a 50 sq.m plot after applying nitrogen fertilizer. Calculate correlation coefficient.

Amount of nitrogen (Kg/plot) : 20 30 50 90 100

Yield of Maize (kg) : 8.45 12.75 10.9 14.8 15.75

24. Find the regression equation of Y on X or X on Y for the following data :

X : 3 4 6 7 8 10 12 14

Y : 6 3 7 11 5 8 10 12

25. Define natality and mortality and explain estimation of population.