

B.N. Bandodkar College of Science, Thane
F.Y. B.Sc. First Semester end Examination Oct 2011- Additional exam
Statistics Paper I

Duration 2 hrs

Max Marks-60

- 1) All Questions are compulsory.
 N.B. 2) Figures to right indicate marks.
 3) Use of calculators is allowed.
- Q1) Attempt any Three
- 1) What is measurement of scales? Write the names of various scales with example. 5
 - 2) Discuss the objectives of tabulation. Write down characteristics of good table. 5
 - 3) Distinguish between 5
 - i. Population and Sample
 - ii. Variable and attribute
 - iii. inclusive type and exclusive type of classes
 - 4) Define Yule's coefficient of association-Q and coefficient of colligation-Y in case of two attributes. Further show that $Q = \frac{2Y}{1+Y^2}$ 5
- Q 2) a) Distinguish between One dimensional and two dimensional diagrams. 3
 b) Attempt any Three
- 1) With the help of suitable example, explain stem and leaf diagram. 4
 - 2) Write down the names of all the diagrams you have studied. Also state the merits and demerits of the diagrams. 4
 - 3) Explain the construction of histogram with a example for unequal width class intervals? 4
 - 4) With the help of suitable example explain the construction of ogives. 4
 - 5) With the help of an example explain how you draw frequency polygon and frequency curve. 4
- Q.3) a) State and prove the properties of arithmetic mean. 7
 b) Attempt any **one** 8
- 1) Define arithmetic mean, Geometric mean and Harmonic mean.
 For any two positive numbers a, b show that

$$A.M \geq G.M. \geq H.M.$$
 - 2) Define median. Explain with the help of an example how you evaluate it in case of classified data graphically and by using formula. 8
- Q.4) Attempt any **Three**

- 1) Prepare the blank table to represent the data Number of women in Thane according to Marital status:-Married , unmarried; Employed- Yes, No; Age group- 20-25, 25-35, 35-45, 45-60. 5
- 2) Distinguish between diagrams and graphs. 5
- 3) What are the essential requisites of good measures of central tendency? Which measure satisfies most of the requisites? 5
- 4) a) Explain i) weighted arithmetic mean ii) Combined arithmetic mean 5
b) State the empirical relationship between mean, median and mode. When it is applicable?

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