2018

CBCS

1st Semester

STATISTICS

PAPER—GE1T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Statistical Methods

Group—A

1. Answer any *five* questions :   5×2

   (a) Define coefficient of variation.

   (b) What is scatter diagram ?

   (c) Give a example of nomial and ordinal data.

   (d) What is rank correlation ?

   (e) When mean deviation about mean equals standard deviation for a set of observations ?

   (f) Distinguish between partial and multiple correlation.

(Turn Over)

(g) Give two advantages of using median over arithmetic mean.

(h) How do you obtain median using ogive ?

Group—B

2. Answer any *four* questions : 4×5

(a) Obtain the angle between two regression lines.

(b) Distinguish between histogram and bar diagram.

(c) How do you fit a exponential curve to a bivariate data ?

(d) Define 'absolute' and 'complete' association in a 2×2 contingency table.

(e) Show that, standard deviation ≥ | Mean – Median |

(f) What is primary data ? Discuss 'Interview' method and 'Questionnaire' method for collecting primary data.

Group—C

3. Answer any *one* question : 1×10

(a) Show that
(i) $b_2 \geq 1$ (ii) $b_2 \geq b_1$ (iii) $b_2 \geq b_1 + 1$.
Also discuss the cased when the equality holds.
(Symbols have their usual meaning)

(b) What do you mean by the term 'regression' ? Gives a bivariate data, obtain the fitted linear regression equation to this data. Discuss the cases when (i) $r = -1$ (ii) $r = 1$ where r is the correlation coefficient between the two variables.

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