2018

CBCS

3rd Semester

ECONOMICS

PAPER—C7T

(Honours)

Full Marks : 60

Time : 3 Hours

The figures in the 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 Method for Economics

Answer *all* questions

Group—A

1. Answer any *ten* quesitons : 10×2

(a) What do you mean by a questionnaire ?

(b) What do you mean by a mesokurtic distribution ?

(c) Define random sampling.

(d) What is sampling error ?

(e) What is meant by a parameter in statistics ?

(f) What is GDP deflator ?

(g) What do you mean by primary data and secondary data ?

(h) What are class boundaries ? Give an example.

(i) Draw an ogive for the following data :

26-35	36-45	46-55	56-65	66-75	76-85
3	15	56	21	12	6

(j) Show that root mean square deviation is least when it is measured around mean.

(k) What is a symmetric distribution ?

(l) What is coefficient of variation ?

(m) What is standard normal variable ?

(n) Define marginal distribution.

(o) State the properties of a good estimator ?

Group—B

2. Answer any *four* questions : 4×5

(a) What do you mean by cost of living index? How is the cost of living index for agricultural labourers (CPIAL) calculated ? 5

(b) Distinguish between Point and Interval Estimation.

(c) Find the expectation and standard error of sample mean under SRSWR.

(d) The mean height of 1000 students of a certain college is 165 cms, and the s.d is 10 cms. Assuming that the height distribution is normal find the no. of students whose heights is less than 172 cms. 5

(e) What is a 'standard normal distribution'? State some of its important properties. 2 + 3

(f) What are the tests to be satisfied by a good index number? Examine how far they are met by Fisher's ideal index number. 2 + 3

Group—C

3. Answer any *two* questions : 2×10

(a) How is the likelihood function of a parameters defined ? What is meant by a maximum likelihood estimation ? 6 + 4

(b) Show that sample mean $\bar{x}$ is the best linear unbiased estimator of population mean μ, both under SRSWR and SRSWOR. 10

(c) Give some examples where geometric mean is the most appropriate average. Establish the relation AM ≥ GM ≥ HM for a set of n observations. 2 + 8

(d) i) Find the mean and the standard deviation of binomial distribution with parameters n and P.

ii) The average number of defects per yard on a piece of cloth is 0.9. What is the probability that a one-yard piece chosen at random contains less than 2 defectives? (Given $e^{0.9} = 2.46$) 6 + 4

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