

4/EH-28 (iv) (Syllabus-2015)

2017

(April)

STATISTICS

(Elective/Honours)

(Applied Statistics)

STEH-4 (TH)

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, selecting **one** from each Unit

UNIT—I

1. (a) Explain crude and standardized death rates. 4
- (b) In what way is standardized death rate superior to crude death rate? 2
- (c) Explain briefly the direct and indirect methods of finding standardized death rates. 6

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(Turn Over)

- 2. (a) In what way total fertility rate (TFR), gross reproduction rate (GRR) and net reproduction rate (NRR) differ from one another as measures of reproduction? 6
- (b) Does TFR strictly conform to our ideas of a measure of reproduction? 3
- (c) How does NRR indicate the growth of population? 3

UNIT—II

- 3. (a) What do you understand by statistical quality control (SQC)? 2
- (b) Discuss the causes of variation in quality. 4
- (c) Explain in detail the \bar{X} and R charts. 5
- 4. (a) Explain the concepts of producer's risk and consumer's risk. 4
- (b) Describe the double sampling plan. 4
- (c) Discuss the relative merits and demerits of single and double sampling plans. 3

UNIT—III

- 5. (a) Define the following index numbers and discuss their merits and demerits : 6
 - (i) Laspeyre's index number
 - (ii) Paasche's index number
 - (iii) Fisher's ideal index number
- (b) Explain the following : 5
 - (i) Time reversal test
 - (ii) Factor reversal test
- 6. (a) "Index numbers are economic barometers." Explain. 3
- (b) What is a cost of living index number? 2
- (c) Discuss the following statement : 2

"The cost of living index number is essentially a consumer's price index."
- (d) State the important steps involved in construction of cost of living index numbers. 4

UNIT—IV

- 7. (a) Define a time series. Discuss briefly its important components. 2+5

- (b) Explain the additive and multiplicative models of a time series. 4
8. (a) Explain the laws of supply and demand. 4
- (b) What do you mean by price elasticity of demand? 3
- (c) Describe Pareto's law of income distribution. 4

UNIT—V

9. Write a short note on statistical offices at the centre and in the States of India. 11
10. Write short notes on the following : 11
- (a) Statistics of transport and communications
- (b) Financial and banking statistics
