

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

**2 0 2 2**

**( May/June )**

**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, taking one from each Unit**

**UNIT—I**

1. (a) Explain in detail crude death rate and age-specific death rate. 3+3=6  
(b) Explain briefly the direct and indirect methods of finding standardized death rates. 6
2. What is meant by fertility? Describe briefly crude birthrate, general fertility rate and total fertility rate, as measures of fertility and also mention their merits and demerits.

**2+10=12**

## UNIT—II

3. (a) What do you understand by statistical quality control (SQC)? Discuss the causes of variation in quality.  $2+4=6$
- (b) What is a control chart? Briefly describe the construction of a control chart and mention its uses.  $1+4=5$
4. (a) Explain the concepts of producer's risk and consumer's risk. 4
- (b) Describe the double sampling. Discuss its merits and demerits.  $3+4=7$

## UNIT—III

5. What is an index number? Discuss the problems involved in the construction of index number. Write down the uses of index number.  $2+6+3=11$
6. (a) What is an ideal index number? Show that Fisher's index number is an ideal index number.  $1+4=5$
- (b) Compare the following concepts :  $3+3=6$
- (i) Fixed base index and chain base index
- (ii) Laspeyres' price index and Paasche's price index

## UNIT—IV

7. (a) Define a time series. Briefly discuss the different components of a time series.  $2+5=7$
- (b) Explain the different models of a time series. 4
8. (a) Define price elasticity of demand and income elasticity of demand. Point out their uses in economic analysis.  $4+3=7$
- (b) Describe Pareto's law of income distribution. 4

## UNIT—V

9. Explain the methods of collection of official statistics in India, their reliability and limitations. 11
10. Write short notes on the following :  $5\frac{1}{2}+5\frac{1}{2}=11$
- (a) Industrial statistics
- (b) Statistics of transport and communications

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