

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

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(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) What do you mean by demographic data? Write briefly the different sources of demographic data. 4
- (b) What is mortality? Write different measures of mortality. 3
- (c) What do you mean by a life table? What purpose does it serve? Also mention different columns of life table. 5

(Turn Over)

(2)

2. Write notes on the following : $4 \times 3 = 12$
- (a) Measures of fertility
 - (b) Gross reproduction rate and net reproduction rate
 - (c) Population projection
 - (d) Migration

UNIT—II

3. (a) What do you mean by statistical quality control? Write down the advantages and limitations of SQC. 4
- (b) Describe control chart and control limits. 4
- (c) Write down the difference between \bar{X} -chart and R-chart. 3

4. Write notes on the following : $1\frac{1}{2} + 1\frac{1}{2} + 2 + 2 + 2 + 2 = 11$

- (a) Producer's risk
- (b) Consumer's risk
- (c) ASN function
- (d) OC function
- (e) Single-sampling plan
- (f) Double-sampling plan

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(Continued)

(3)

UNIT—III

5. (a) Define index number. Mention different uses and limitations of index numbers. 6
- (b) Write briefly the different methods of construction of index number. 3
- (c) What is Fisher's index number? Why is it called an ideal index number? 2
6. (a) Describe the different problems involved in the construction of an index number. 6
- (b) Write a note on cost living index number. 5

UNIT—IV

7. (a) What do you mean by a time series? Mention the models of time series. Describe the different components of time series. $1 + 1 + 4 = 6$
- (b) Describe the following : $2\frac{1}{2} \times 2 = 5$
- (i) Estimation of trend by the moving average method
 - (ii) Estimation of seasonal variation by the link relative method
8. (a) Write in brief : 4
- (i) Static laws of demand and supply
 - (ii) Price elasticity of demand

(Turn Over)

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(b) The demand curve and supply curve of a commodity are given by $d = 19 - 3P - P^2$ and $S = 5P - 1$. Find the equilibrium price and quantity exchanged.

1

(c) Write notes on the following : $1\frac{1}{2} \times 4 = 6$

- (i) Income distribution
- (ii) Pareto's law
- (iii) Lorenze curve
- (iv) Gini's coefficient

UNIT—V

9. What is official statistics? Write in brief on present official statistical system of India and methods of collection of official statistics. 11
10. Discuss various official agencies responsible for the collection of data mentioning their principal publications and their functions. 11
