

2014

(5th Semester)

STATISTICS

SEVENTH PAPER

(Applied Statistics)

Full Marks : 55

Time : 2 hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

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

UNIT—I

1. Define vital statistics. What are the uses of vital statistics? 2+5=7

Or

Describe the methods of obtaining vital statistics. 7

G15—100/160a

(Turn Over)

UNIT—II

2. Describe specific death rate (SDR) and also explain in brief the age-specific death rate (Age-SDR). 7

Or

Explain briefly the assumptions, descriptions and construction of a life table.

UNIT—III

3. Explain how gross reproduction rate (GRR) is thus a modified form of total fertility rate (TFR). 7

Or

Write a note on net reproduction rate (NRR) and its advantages.

UNIT—IV

4. What is an index number? Describe briefly the problems that are involved in the construction of an index number of prices. 7

Or

Explain weighted aggregate method. Write the different methods used in weighted aggregate for finding index numbers.

UNIT—V

5. What is meant by a time series? Explain the different components of a time series. 7

Or

What are the different methods for measuring a trend in a time series? Explain any two methods of it.

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STATISTICS

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(Applied Statistics)

(PART : A—OBJECTIVE)

(Marks : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 5)

Put a Tick (✓) mark against the correct answer in the brackets provided for it : 1×5=5

1. The ratio of the total number of females to the number of males in a given population is termed as

(a) female ratio ()

(b) male ratio ()

(c) sex ratio ()

(d) population ratio ()

2. The simplest index of mortality is the

- (a) specific death rate ()
- (b) crude death rate ()
- (c) standardized death rate ()
- (d) age-specific death rate ()

3. — is the expectation of life at age 0 and is the average age at death of a person belonging to a given community.

- (a) e_0^1 ()
- (b) e_1^0 ()
- (c) e_0^0 ()
- (d) e_1^1 ()

4. Cyclical fluctuations are caused by

- (a) strikes and lockouts ()
- (b) floods ()
- (c) wars ()
- (d) None of the above ()

5. Paasche's method for finding price index is

(a) $\frac{\sum p_i q_i}{\sum p_0 q_i} \times 100$ ()

(b) $\frac{\sum p_i q_0}{\sum p_0 q_0} \times 100$ ()

(c) $\frac{\sum p_i q_i}{\sum p_0 q_0} \times 100$ ()

(d) None of the above ()

(4)

SECTION—B

(Marks : 15)

Answer the following questions :

3×5=15

1. Define crude death rate (CDR) and write the merits and demerits of CDR.

2. Prove that ${}_n p_x = p_x p_{x+1} \dots p_{x+n-1}$.

3. Define crude birthrate of natural increase and Pearl's vital index. (Marks: 15)

Answer the following questions :

3-5-15

1. Define crude death rate (CDR) and write the merits and demerits of CDR.

4. Explain the additive models of time series.

[5th Semester]

STATISTICS

SEVENTH PAPER

[Applied Statistics]

[PART - A - OBJECTIVE]

[Marks : 20]

The marks in the margin show the full marks for the questions

SECTION - A

[Marks : 5]

Put a Tick (✓) mark against the correct answer in the brackets provided for it:

1. The ratio of the total number of females to the number of males in a given population is termed as
- (a) female ratio
 - (b) male ratio
 - (c) sex ratio
 - (d) population ratio

5. Define cost of living index numbers. Write the uses of it.

- (a) specific death rate
- (b) crude death rate
- (c) standardized death rate
- (d) age-specific death rate

6. — is the expectation of life at age 0 and is the average age at death of a person belonging to a given community.

- (a) e₀
- (b) e_x
- (c) e₆₅
- (d) e₁₀₀

7. Cyclical fluctuations are caused by

- (a) strikes and lockouts
- (b) floods
- (c) wars
- (d) None of the above ***