2022/TDC/ODD/SEM/STSDSE-502T/120

TDC (CBCS) Odd Semester Exam., 2022

STATISTICS

(5th Semester)

Course No. : STSDSE-502T

(Demography and Vital Statistics)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

UNIT—I

1. Answer any *two* of the following questions :   2×2=4

   (a) Name some sources of demographic data.

   (b) What do you understand by population composition?

   (c) What is the dependency ratio and how do you calculate it?

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(Turn Over)

2. Answer any *one* of the following questions :   6

(a) Distinguish between coverage errors and content errors in demographic data. Also suggests some remedies to overcome these errors.   4+2=6

(b) How is sex-ratio measured? What are its implications on a population?   2+4=6

UNIT—II

3. Answer any *two* of the following questions :
   2×2=4

(a) Discuss the sources of obtaining raw data of vital statistics.

(b) "Crude death rate is not a probability rate." Why?

(c) Define the age-specific death rate.

4. Answer any *one* of the following questions :   6

(a) Define standardised death rate. Describe the indirect method of standardised death rates of two regions (say A and B).   2+4=6

(b) Define infant mortality rate. What are its merits and demerits?   2+2+2=6

UNIT—III

5. Answer any *two* of the following questions :
   2×2=4

(a) State some assumptions used in the construction of a life table.

(b) Define force of mortality.

(c) Distinguish between stationary and stable population.

6. Answer any *one* of the following questions :   6

(a) Describe the various columns of a life table and explain how a life table can be constructed from data usually available.
   3+3=6

(b) If μ_x is the force of mortality at age x and m_x is central mortality rate, then prove that

$$\mu_{\left(x+\frac{1}{2}\right)} = m_x$$

UNIT—IV

7. Answer any *two* of the following questions :
   2×2=4

(a) Define total fertility rate.

(b) What are the merits and demerits of crude birthrate?

(c) Distinguish between complete and abridged life tables.

8. Answer any *one* of the following questions : 6

(a) Derive the Reed-Merrell method of construction of abridged life tables.

(b) Explain general fertility rate along with its merits and demerits. Also mention ways to overcome its demerits. 2+2+2=6

UNIT—V

9. Answer any *two* of the following questions :

2×2=4

(a) Define crude rate of natural increase.

(b) Explain why gross reproduction rate is a hypothetical figure.

(c) Define net reproduction rate.

10. Answer any *one* of the following questions : 6

(a) Write a note on gross reproduction rate. Show that GRR ≥ NRR. 3+3=6

(b) "NRR indicates the growth of the population." Explain. Also explain the demerits of NRR. 3+3=6

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