

2023
B.A./B.Sc.
Sixth Semester
DISCIPLINE SPECIFIC ELECTIVE – 3
STATISTICS
Course Code: STD 6.11
(Demography)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. (a) Write short notes on the following: 2×3=6
 - (i) Population composition
 - (ii) Dependency ratio
 - (iii) Balancing equation
- (b) Critically discuss the demographic transition theory. 8
2. (a) Describe the Chandrasekharan-Deming method for estimating vital rates from registration data. 6
- (b) Discuss about the optimum population theory. 8

UNIT-II

3. (a) Define rate and ratio of vital events. What is the basic difference between them? What are the sources of vital statistics data? 2+2+2=6
- (b) What do you mean by mortality? Describe the different measures of mortality. 2+6=8
4. (a) Define the following: 2×3=6
 - (i) CDR
 - (ii) Age SDR
 - (iii) IMR
- (b) Define STDR. How death rates can be standardized? Describe any one method of standardization. 2+2+4=8

UNIT-III

5. (a) Differentiate between stable and stationary population. 4
 (b) What are life tables? Mention the basic assumptions for constructing a life table? Describe the different columns of a complete life table. 2+3+5=10
6. (a) Define cohort and radix of a life table. 2
 (b) Prove the identity with usual meaning $q_x = \frac{2m_x}{2 + m_x}$. 4
 (c) Complete the following life table: 8

x	l_x	d_x	p_x	q_x	L_x	T_x	e_x
16	693435	2762	?	?	?	35081126	?
17	690673	---	---	---	---	?	?

UNIT-IV

7. (a) What is an abridged life table? What are the basic difference between a complete life table and an abridged life table? 2+3=5
 (b) Explain the Greville's method for constructing an abridge life table. 9
8. (a) Define the following: 2×3=6
 (i) GFR
 (ii) TFR
 (iii) Pearls vital index
 (b) Explain GRR and NRR. How do you calculate the NRR of women in a country? Explain the meaning "NRR of a country is 1.19." 4+2+2=8

UNIT-V

9. (a) Define migration. Differentiate between immigration and emigration. 2+4=6
 (b) What is differential migration? Discuss about the factors of differential migration. 2+6=8

10. (a) Define the following: 3×2=6
- (i) Internal migration and international migration
 - (ii) Gross migration and net migration
- (b) Describe the different methods of measuring internal migration. 8
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