M 18907

IV Semester M.A./M.Sc./M.Com. Degree (Reg./Supple./Imp.) Examination, March 2011
STATISTICS
(Paper – 4.3) (Elective – III) Demography

Time: 3 Hours

Max. Marks: 70

*Instruction : Answer **any five** questions. Choosing **one** from **each** Unit.*

UNIT – I

1. Discuss the merits and demerits of :

   a) Census

   b) Sample registration system and

   c) Vital registration system in India. **(5+5+4=14)**

2. a) What is demography ? Explain the components of population change.

   b) Explain the relationship between demography and statistics. **(8+6=14)**

UNIT – II

3. a) Show that the reciprocal of the expectation of life at birth is equivalent to the CDR of the life table population and list the important uses of life tables.

   b) Differentiate multiple and multi state life tables and discuss the construction of an working life table. **(7+7=14)**

4. a) Discuss the measures of mortality and morbidity with illustrations.

   b) Explain the uses of Lexis diagram. **(10+4=14)**

UNIT – III

5. a) Discuss Lotka's stable population theory. Derive an expression of the age distribution of a stable population.

   b) Prove that an uniform change in the mortality of a stable population will not change its age distribution. **(8+6=14)**

6. a) Explain the mathematical model suggested by Gompertz in population growth.

   b) What is intrinsic rate of growth, intrinsic birth rate and intrinsic death rate ? **(8+6=14)**

UNIT – IV

7. a) Explain :

   1) Markov chain

   2) Birth-death process.

   b) What is Stochastic process ? Discuss its uses in demography. **(7+7=14)**

8. a) Distinguish between Coale and Demeny model life tables and U.N. model life tables.

   b) Discuss the UN model life tables for developing countries. **(7+7=14)**

UNIT – V

9. a) What are the indicators of development and discuss the status of Indian states.

   b) Explain how rapid population growth deplete the resources in India. **(7+7=14)**

10. Write notes on :

    a) Sustainable development

    b) Demographic factors affecting savings. **(7+7=14)**