

Reg. No. : .....

M 11878

Name : .....

Fourth Semester M.Sc. Degree Examination, May 2006  
STATISTICS

Paper 4.3 : Demography (2004 Admn.)

Time: 3 Hours

Total Marks: 70

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

UNIT - I

1. a) Define i) Population ii) Charts iii) Radix and iv) Person year. **6+8=14**  
b) Discuss various methods and uses of studying age-sex composition of a population.
2. a) Distinguish between crude rates and specific rates. What are the methods for comparison of rates? **7+7=14**  
b) Define i) mortality ii) fertility and iii) migration. Explain their role on population change.

UNIT - II

3. a) Explain the indices of mortality measures. Explain the indirect method of standardization of mortality rates. **7+7=14**  
b) Define i) TFR ii) CBR iii) NRR and iv) GRR. Explain a method for standardising fertility rates.
4. a) Explain the construction of a life table. Describe its use in demography. **8+6=14**  
b) Explain multiple decrement and multistate life tables.

UNIT - III

5. a) Define i) intrinsic grow rate and ii) net production rate. Establish the relationship between them. **7+7=14**  
b) Explain the concept of population momentum and population waves. **7+7=14**
6. a) Discuss different methods of population projection and estimation. **7+7=14**  
b) Explain exponential and logistic growth models. **P.T.O.**

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UNIT - IV

- 7. a) Derive Kolmogorov's backward differential equation for a birth and death process. 7+7=14  
b) Distinguish between Leademan's system and Brass Logit system.
- 8. a) Define Makeham's model for mortality. Explain a method for fitting the Makeham's curve. 7+7=14  
b) Discuss UN model life tables.

UNIT - V

- 9. a) Discuss the role of population in development of the country. 7+7=14  
b) Explain i) Human development index and ii) Human poverty index.
- 10. a) Distinguish between the effect of increasing population in developing countries and developed countries. 7+7=14  
b) Write short notes on i) Lotha's stable population theory and ii) Birth interval analysis.