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7. Write notes on the following :

(a) Population composition

(b) Population potential

(c) Different columns of an abridged life table

(6,6,6)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1913

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Unique Paper Code : 2373012005

Name of the Paper : Demography DSE

Name of the Course : **B.Sc. (Hons.) Statistics**

Semester : IV

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all.
3. **All** questions carry equal marks.

1. (a) What are different components of demography?
What are the objectives of population studies?
Distinguish between stationary and stable population.

(500)

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- (b) Describe scale of urbanization and scale of population concentration. 'Level of urbanisation does not change even if urban population has doubled': explain it with an example. (9,9)
2. What is an abridge life table? Why is it needed? State and prove Reed and Merrell's method for the construction of an abridged life table. (18)
3. (a) Describe a method to estimate the coverage of two independent systems for collecting information about demographic data.
- (b) Discuss the nature of errors in the age data for younger and older age groups. Describe a method of adjusting age data at adult ages. (9,9)
4. (a) Describe United Nation's index for measuring the tendentious bias in the accuracy of census age-sex data.

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- (b) Define balancing equation of the population growth. Describe two uses of balancing equation. (9,9)
5. (a) What are different methods of population estimation and projection? Describe geometric growth model for projecting population of 2021 if 2001 is the base year and population of 2011 and 2001 is given.
- (b) Describe Pearl and Reed method for fitting a logistic curve to population data. (9,9)
6. What do you mean by graduation of mortality rates? Stating the assumptions, develop Makeham's graduation model and hence Gompertz model. Also describe a method for fitting of Makeham's graduation formula. (18)

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