University of Colombo

Faculty of Arts

Bachelor of Arts Degree Examination (Special/General)– Third Year

End Semester Examination–Semester II - 2016/2017

DMG 3243: Population Forecasting for Social and Economic Planning

Answer three (03) questions only.　　　　　　　　　　　　Time: Two Hours (02)

This question paper contains five (05) questions and two (02) pages.

Calculators can be used.

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1. a) Examine the difference between "Population Estimates" and "Population Projections".

   (08 Marks)

   b) Discuss the importance of population projections for socio-economic planning of a country.

   (12 Marks)

2. Explain why attention should be paid to the changes in key elements of population when preparing socio economic development plans by giving examples.

   (20 Marks)

3. a) Explain how the Balancing Equation Method can be used in estimating natural increase of a country.

   (08 Marks)

   b) The population in a certain state as at 20.06.1994 was 140,000. During the period from 20.06.1994 to 10.08.2000 some demographic data registered in the state are as follows:

   No. of registered births 15,736

   No. of registered deaths 5,172

   No. of in-migrants registered 2,457

   No. of out-migrants registered 1,378

The completeness of registration systems in as follows:

Births 95.3%

Deaths 98.2%

It is reported that 3.2% of the in-migrants enter the state as illegal in-migrants

Out-migrants 100%

Using this data estimate the population of the state as at 10.08.2000

(12 Marks)

4. a) Briefly explain the key elements of social development by giving examples.

(08 Marks)

b) Discuss the importance of studying the age-sex composition of a population for socio-economic planning in a country.

(12 Marks)

5. a) Explain the following population growth models that can used in preparing population estimates.

    i.   Arithmetic growth model
    ii. Geometric growth model

(06 Marks)

(b) The 2001 Census held in a country "X" enumerated its population as 18,662,351. If this population has a geometric growth for the next five years with an annual growth of 1.3%, and then for the next four years follows an exponential growth model with an annual growth of 1.1%, estimate the country's population in 2010.

(14 Marks)