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

Calculators can be used

Life tables required for calculations are provided

This paper contains five (05) questions and three (03) pages

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1. a) Briefly examine the factors in which the quality of the mortality data depends on.

    (Marks 07)

    b) State any 04 mortality measures that can be calculated using mortality data in a country and discuss the importance of each measure in mortality studies.

    (Marks 13)

2. Explain the demographic, social and economic determinants that influence mortality of a country and examine how they have influenced the current mortality levels in Sri Lanka.

    (Marks 20)

3. a) Based on the cause of death, infant deaths can be divided into two categories. Explain the importance of these two categories in the infant mortality analysis.

    (Marks 05)

    b) Briefly describe the importance in the use of Adjusted Infant Mortality Rate than the Conventional Infant Mortality Rate in calculating Infant Mortality Rate of a country.

    (Marks 05)

    c) Following table provides data on infant deaths of the country "X". Answer the questions using the table given below.

    (Marks 10)

Year	Birth Cohort	Number of live births	Number of infant deaths
2014	2014	3,913,000	1 00,480
2015	2014	-	9,000
2015	2015	3,965,000	101, 130
2016	2015	-	5,000
2016	2016	4,078,000	102,01 1

i) Draw a Lexis diagram for the above data.

ii) Calculate the Conventional Infant Mortality Rate and Adjusted Infant Mortality Rate for the year 2015 using the cohort probabilities method.

iii) Calculate the Infant Mortality Rate for the year 2016 using the separation factors method.

4. a) Discuss the other uses of constructing a life table apart from calculating life expectancy.

(Marks 05)

b) You are provided with a life table constructed for males in Hambantota District in Sri Lanka for the period 2011-2013. Use the life table provided and answer the questions given below.

(Marks 07)

i) State the difference between l_x and $_nLx$ columns.

ii) Calculate the birth rate and the death rate of the given life table.

iii) If there is a male population of 22,883 by the age of 25 years, calculate male population after 5 years.

iv) If there is a male population of 20,031 in the age group of 35-39 years, calculate surviving male population after 10 years.

c) "Model Life Tables have made it easier to understand the mortality experience of developing countries in the absence of a complete vital registration systems." Critically examine the above statement.

(Marks 08)

5. a) Describe the importance of survival function in studying mortality experiences of a population taking developed and developing countries for example.

(Marks 10)

b) "When considering the cause specific deaths in developing countries, communicable diseases and increasing trend of non-communicable diseases could be observed". Examine this statement.

(Marks 10)