



FACULTY OF MEDICINE
UNIVERSITY OF RUHUNA

THIRD EXAMINATION FOR MEDICAL DEGREES PART II SEPTEMBER 2019
COMMUNITY MEDICINE PAPER I

Answer **ALL FIVE** questions
Answer each part in a **SEPARATE** book

Time: 9.00 am – 12.00 noon
Duration: Three hours

PART A

1. A study was conducted to examine whether there is an association between gender and back pain among employees in a garment factory. Twenty percent of male and 40% of female participants investigated were found to be having back pain. Two hundred males and 200 females participated in the study.
 - 1.1 What is the study design used in this research? (10 marks)
 - 1.2 What are the advantages and disadvantages of your proposed research design? (20 marks)
 - 1.3 State your null and alternative hypotheses (20 marks)
 - 1.4 What is (are) the test (s) that you can use to test your null hypothesis (10 marks)
 - 1.5 Test your hypothesis at $\alpha = .01$ level (40 marks)

**** (Chi square tables and Z tables should be provided.)**

PART B

2.
 - 2.1 What are the three epidemiological measures of disease frequency and how are they related? (30 marks)
 - 2.2. What characteristics of a disease would indicate its suitability for screening? (30 marks)
 - 2.3 List the criteria commonly used to assess the causal nature of an observed association. (40 marks)

PART C

3.

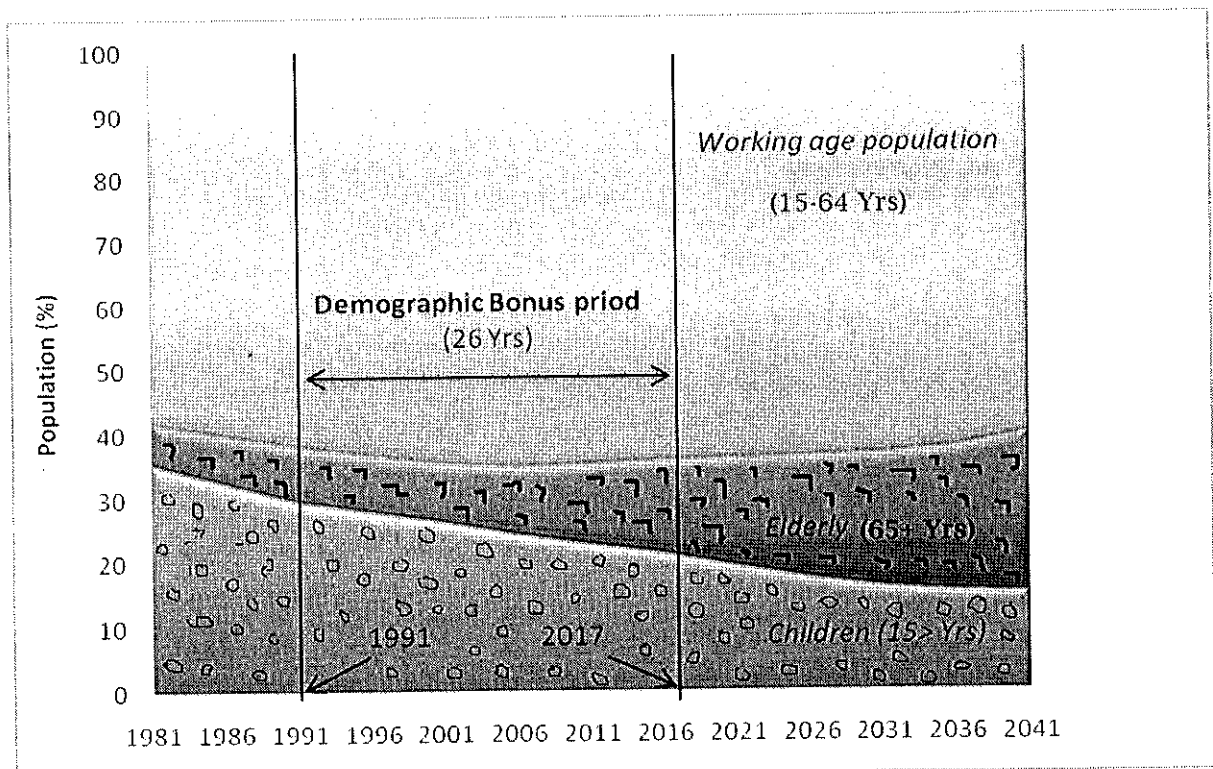
3.1 Over the last 50 years, human activities have released sufficient quantities of greenhouse gases to trap additional heat in the lower atmosphere and it affects the global climate. Climate change affects the social and environmental determinants of health in many ways. According to World Health Organization, in 2030-2050 a climate change is expected.

3.1.1 List four environmental determinants of health that can get affected due to climate change. **(10 marks)**

3.1.2 What is carbon foot print? **(10 marks)**

3.1.3 Briefly discuss impact of climate change on health with examples **(30 marks)**

3.2. Following graph illustrates the relative size of children <15 years, elderly >64 years and working age population (15-59 years) in Sri Lanka with standard projections



- 3.2.1 Define young dependency ratio and old dependency ratio (10 marks)
- 3.2.2 What is demographic bonus period? (05 marks)
- 3.2.3 Name the possible reasons for the observed changes in young and elderly population in the country. (15 marks)
- 3.2.4 What are the problems that Sri Lanka will encounter if the population is going to change according to the above graph (20 marks)

PART D

- 4 A 11 year old girl was found to have a Body Mass Index (BMI) of 22 kg/m^2 at the School Medical Inspection. The dietary history revealed a high intake of fast food and junk food.
- 4.1 What are the adverse health consequences of her food choices? (20 marks)
- 4.2 As the Medical Officer conducting SMI how would you manage this child? (40 marks)
- 4.3 What advice would you given to the school authorities if you come across many children with Obesity in this school? (40 marks)

PART E

- 5.
- 5.1.1 Define the term "anaemia during pregnancy". (10 marks)
- 5.1.2 Briefly describe the measures carried out under antenatal care to prevent and manage anaemia during pregnancy among Sri Lankan antenatal mothers. (40 marks)
- 5.2 Describe the role of primary care physician in occupational health. (50 marks)