

FACULTY OF MEDICINE  
UNIVERSITY OF RUHUNA



THIRD EXAMINATION FOR MEDICAL DEGREES PART II, OCTOBER 2018  
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.
- 1.1 At a screening programme in the community for visual defects using the Snellen's chart for children aged 6-12 years, it was found that approximately 5% of children are having defects. They were referred to the eye clinic for further investigations. The screening test conducted has a sensitivity of 80% and specificity of 90%.
- 1.1.1 If 2000 children attended for the screening test how many children will be referred to the clinic? (30 marks)
- 1.1.2 Calculate how many children with positive screening test had visual defects. (30 marks)
- 1.2 Explain the different ways of controlling of confounding in an epidemiological study. (40 marks)

**PART B**

- 2.
- 2.1 A study was conducted to see whether there is an association between gender and obesity. Out of the participants 32% of males and 45% of females were found to be obese. There were 300 males and 100 females in the study.
- 2.1.1. What is the study design used in this research? (10 marks)
- 2.1.2. State your null and alternative hypotheses? (10 marks)
- 2.1.3 What is (are) the test(s) that you can use to test your null hypotheses? (10 marks)
- 2.1.4 Test your hypothesis at  $\alpha = 0.01$  level (40 marks)
- (Chi square tables and Z tables are provided.)
- 2.2 Human behavior plays a major role in controlling Non Communicable Diseases (NCD) in Sri Lanka. Discuss the above statement. (30 marks)

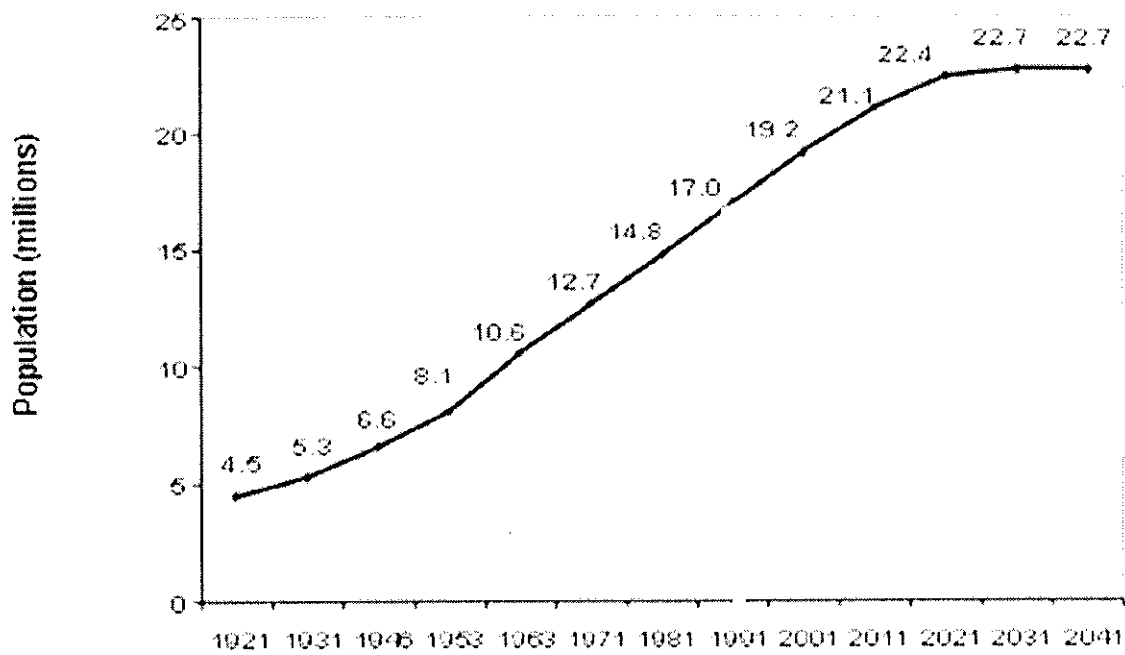
**PART C**

- 3.
- 3.1.1 List the occupational health problems of Health Care Workers. (15 marks)
- 3.1.2 How would you prevent above mentioned occupational health problems of Health Care Workers. (35 marks)
- 3.2 Noise pollution is a major environmental problem in urban settings. Briefly describe the measures that can be used to control noise pollution in an urban environment in Sri Lanka. (50 marks)

**PART D**

4.

4.1 Following graph indicates the size of Sri Lankan population from the year 1921 to 2041.



4.1.1. Describe Sri Lanka's population growth according to the demographic transition cycle based on the above graph.

(20 marks)

4.1.2 Briefly explain what factors have affected this observation.

(30 marks)

4.2 Briefly describe how family planning acts as a pillar to achieve safe motherhood.

(50 marks)

**PART E**

5.

5.1 Dasun is a three year old boy, the 5<sup>th</sup> child of a farming family in a rural area. On a recent visit to Maternal & Child Health clinic, he was found to have moderate malnutrition. The mother explained that the child has a history of frequent respiratory tract infections, though he did not have any other major health problems.

5.1.1. Describe how frequent infections could have contributed to his current status of nutrition.

(25 marks)

5.1.2 What are the other possible factors that may have affected his nutritional status?

(25 marks)

5.1.3. Describe the dietary advice you would give to improve his nutritional status

(50 marks)