

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**SELECTION EXAMINATION FOR MSc (COMMUNITY MEDICINE)**  
**SEPTEMBER 2022**

**Date:** 22<sup>nd</sup> September 2022

**Time:** 9.00 a.m. – 12.00 noon

Answer **all five** questions.

Answer each question in a **separate book**.

**Part A**

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- 1.1. In 2016, Sri Lanka was certified as a malaria-free country by the World Health Organization (WHO). There have been zero cases of indigenous malaria reported in Sri Lanka since November 2012. However, there are about 50-100 cases of imported malaria reported every year.

Discuss the challenges in maintaining malaria-free status in Sri Lanka.

(40 marks)

- 1.2. There is a significant public outcry to remove a recently established dumping yard in your Medical Officer of Health (MOH) area stating the number of dengue cases has increased.

1.2.1. As the MOH, describe how would you confirm whether there is a true increase in the number of dengue cases. (20 marks)

1.2.2. Assuming the MOH confirmed a true increase of dengue cases, outline how you would establish an association between the dumping yard and increase of dengue cases. (40 marks)

2. Many risk factors for chronic non-communicable diseases (NCDs) begin in childhood. Therefore, for a healthy nation, it is important to take all measures to prevent children being exposed to NCD risk factors.

2.1. Describe possible behavioural risk factors among children that may lead to non-communicable diseases in later life. (40 marks)

2.2. Discuss various strategies that can be taken to prevent risk factors for non-communicable diseases among school children in the country.

(60 marks)

Contd...../2-

3. During the COVID-19 pandemic, the maternal mortality ratio increased globally.
- 3.1. Define the Maternal Mortality Ratio. (10 marks)
- 3.2. Describe how the COVID-19 pandemic affected maternal mortality ratio in Sri Lanka. (50 marks)
- 3.3. Briefly describe, with justification, the strategies that a Medical Officer of Health (MOH) can take to prevent maternal deaths in a similar situation in the future. (40 marks)

### Part B

- 4.
- 4.1. State the most appropriate statistical test in the following situations giving reasons:
- 4.1.1. To compare mean haemoglobin levels between strict vegetarian (vegans) and non-vegetarian undergraduates in a Medical Faculty. (20 marks)
- 4.1.2. To measure impact of a dietary intervention measured as weight loss in kg among a group of obese adults. (20 marks)
- 4.1.3. To determine the association between BMI in  $\text{kgm}^{-2}$  and systolic blood pressure in mmHg. (20 marks)
- 4.2. A cross-sectional study was conducted to find the association between employment status of the women and intimate partner violence during the last 12 months. The results are given in Table 1 below:

Table 1: Association between employment status of the women and intimate partner violence during the last 12 months

		Intimate partner violence		$\chi^2$ ; df; p
		Yes N (%)	No N (%)	
<b>Employment status</b>	<b>Employed</b>	112 (17.9)	512 (82.1)	27.4; 1; <0.001
	<b>Unemployed</b>	328 (29.4)	788 (70.6)	
<b>Total</b>		440 (25.3)	1300 (74.7)	

Comment on the appropriateness of the test and interpret the findings. (40 marks)

5.

5.1. It has been reported in the media that the child malnutrition level has significantly increased during the current economic crisis in Sri Lanka.

Discuss how you would verify the validity of this statement. (50 marks)

5.2. Sri Lanka is considered as the country with the highest proportion of older adults in South Asia.

Briefly describe the public health implications of population ageing.

(50 marks)

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