

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION FOR MSc (COMMUNITY MEDICINE)
NOVEMBER 2025

Date:- 21st November 2025

Time:- 9.30 a.m. - 12.30 p.m.

Answer **all five (05)** questions.

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

Part A

1. Ten (10) dengue patients have been notified in an area over the last two weeks. On field inspection, mosquito breeding sites were found in almost all premises.
 - 1.1. List three (03) entomological indices used to measure the mosquito breeding density. (15 marks)
 - 1.2. List three (03) activities that can be conducted to reduce breeding sites in this area. (15 marks)
 - 1.3. At the field investigation, it was found that three (03) unnotified dengue patients had been in that area three weeks ago.
 - 1.3.1. Name the ordinance (law) which makes the notification of communicable diseases mandatory in Sri Lanka? (10 marks)
 - 1.3.2. Briefly explain the importance of notification of communicable diseases, taking dengue fever as an example (30 marks)
 - 1.4. Briefly discuss the role of local government (local authorities) in prevention of dengue. (30 marks)

Contd...../2-

2.

2.1. Define health promotion

(15 marks)

2.2. Briefly describe the importance of health promotion for non-communicable diseases (NCD) prevention based on Figure 1. (35 marks)

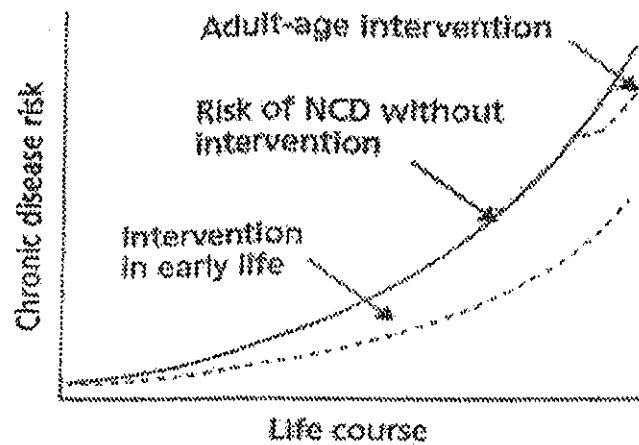


Figure 1

2.3. You are the Medical Officer of Health (MOH) in area X.

2.3.1. Describe three (03) different activities you can implement to strengthen health promotion for NCD prevention in your area. (30 marks)

2.3.2. List five (05) non-health stakeholders you can collaborate with, to strengthen NCD prevention activities. (20 marks)

3. A 19-year-old primiparous mother brings her 21-day-old baby to the poly clinic of the MOH office. She complains that the baby cries excessively after feeding and worries that breast milk is inadequate.

3.1. Briefly describe how you would assess whether this baby is receiving adequate amount of breast feeding. (30 marks)

3.2. Giving reasons, state what advice you would give to this mother about starting a contraceptive method in the postpartum period. (25 marks)

3.3. Name three (03) appropriate methods of contraception for her. (15 marks)

3.4. As the Medical Officer of Health, outline five (05) community-based activities you would implement to reduce teenage pregnancies in your area. (30 marks)

Part B

4. A researcher wants to study the psychological wellbeing of the medical doctors working in different types of curative care institutions in Colombo district. Using a self-administered questionnaire the researcher plans to assess psychological wellbeing and its associated factors.
- 4.1. Name the most appropriate study design for this study. (15 marks)
- 4.2. If the researcher wants to get a representation of medical doctors from all types of hospitals, name the most suitable sampling method for this study. (15 marks)
- 4.3. State two (02) advantages and disadvantages of the sampling technique mentioned in 4.2. (20 marks)
- 4.4. Name the epidemiological measure that can be used to describe psychological wellbeing among the medical doctors of Colombo district. (10 marks)
- 4.5. If the association between psychological wellbeing (good and poor) and the sex of the study participants (male and female) needs to be tested, name the most appropriate statistical test to be used, giving reasons. (20 marks)
- 4.6. List five (05) ethical aspects that need to be considered when conducting this study. (20 marks)

Contd..../4-

5. A new point-of-care rapid test for detecting pre-diabetes was evaluated in a community screening programme. A total of 300 adults were tested using both the new test and the standard laboratory HbA1c test (gold standard).

	Gold Standard Positive	Gold Standard Negative	Total
New Test Positive	54	21	75
New Test Negative	06	219	225
Total	60	240	300

- 5.1. State the number of true positives, false positives, false negatives, and true negatives for the new test. (20 marks)
- 5.2. Calculate sensitivity, specificity, Positive Predictive Value (PPV), and Negative Predictive Value (NPV) of the new test. (40 marks)
- 5.3. Interpret the results and comment on the suitability of the new test for community screening of pre-diabetes. (20 marks)
- 5.4. List three (03) practical considerations before introducing the test in primary healthcare settings. (20 marks)