

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

**SELECTION EXAMINATION FOR MD (COMMUNITY MEDICINE/
COMMUNITY DENTISTRY) - JULY 2025**

Date:- 18th July 2025

Time:- 9.00 a.m. - 10.00 a.m.

STRUCTURED ESSAY QUESTION PAPER

Answer all two (02) questions.

Answer each question in a separate book.

1. A hospital-based case-control study was conducted to investigate risk factors for Metabolic Dysfunction-Associated Steatotic Liver Disease (MASLD). Cases were patients diagnosed with MASLD using ultrasound scan. Controls were patients attending the same hospital for unrelated complaints, matched by age and sex. One of the risk factors considered was the history of Type 2 Diabetes Mellitus (T2DM). The estimated Odds Ratio (OR) was 4.0 (95% CI: 2.5-6.5).
 - 1.1. State two (02) advantages of the study design used for investigating the risk factors for MASLD. (20 marks)
 - 1.2. Interpret the results for the association between T2DM and MASLD. (20 marks)
 - 1.3. Describe briefly the limitations of using patients attending the same hospital with unrelated complaints, as controls. (20 marks)
 - 1.4. Outline the potential implications of misclassification bias on the results of this study. (20 marks)
 - 1.5. Outline two (02) practical approaches by which misclassification bias could be minimised in this study. (20 marks)
2. Cell phone towers primarily emit non-ionizing radiofrequency (RF) radiation, a type of electromagnetic radiation. Some studies suggest potential health effects like headaches or sleep disorders at high exposure levels.
 - 2.1. State the most appropriate study design you would select to determine the association between exposure to RF radiation from a cell phone tower and the above-mentioned health effects. (10 marks)
 - 2.2. Outline the steps of the study mentioned in 2.1. (40 marks)
 - 2.3. List two (02) limitations inherent to the study design mentioned in 2.1. and steps to overcome them. (20 marks)
 - 2.4. Outline the plan of data analysis of this study. (30 marks)