

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION FOR MD (COMMUNITY
MEDICINE/COMMUNITY DENTISTRY) – NOVEMBER 2021

Date:- 2nd November 2021

Time:- 1.00 p.m. – 2.00 p.m.

Answer **all two (02)** questions.

Answer each question in a separate book.

1. District COVID-19 Control and Prevention Committee consists of different medical specialists, administrators, religious leaders, policymakers and local politicians. During a committee meeting, several questions were raised by members which were directed to the Consultant Community Physician in the district.

1.1. Write the best epidemiological study design to answer each of the questions below, giving reasons for your selection. (60 marks)

1.1.1. “What is the frequency of long-COVID among people with symptomatic SARS-CoV-2 infection?”

1.1.2. “Is the incidence of COVID-19 deaths related to the average household income at Divisional Secretariat level?”

1.1.3. “Is vitamin D therapy effective in reducing COVID-19 related complications?”

1.1.4. “If a classroom-based health education programme is conducted, will it help to improve social distancing among school children?”

1.1.5. “What type of COVID-19 patients will develop pneumonia?”

1.1.6. “Whether the patients with chronic non-communicable diseases received follow up care during the lock down period?”

1.2. Describe an appropriate sampling method for the proposed study design to answer question 1.1.6. (20 marks)

1.3. List two (02) biases each that could arise in the study designs proposed to answer question 1.1.2. and 1.1.3. (20 marks)

2. A research team developed a new, culturally specific tool based on a score for screening of depression among adolescents. A validation study has been carried out using psychiatrist's diagnosis as the gold standard.

2.1. Describe the analytical approach that the research team should follow to establish the optimal threshold for the screening tool to identify whether an adolescent is having depression or not. (40 marks)

2.2. The research team claims that the new instrument is better in detecting adolescents with depression than existing screening tools.

Name the best measure generated by the above analysis which will support this claim. (10 marks)

2.3. A sample of 400 adolescents was recruited to establish the validity of this tool. Out of them, 40 were diagnosed to have depression by a psychiatrist. A total of 54 adolescents was screened positive according to the new tool, and 36 of them had confirmed depression.

Calculate the relevant parameters to evaluate the screening tool. (50 marks)