

Master copy.

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION FOR MD (COMMUNITY
MEDICINE/COMMUNITY DENTISTRY) JUNE 2019

Date : 04th June 2019

Time : 1.00 p.m - 2.00 p.m

Answer all questions.

Answer each question in a separate book.

1. Morbidity records of a hospital located in an industrial zone revealed, that high proportion of patients admitted to the hospital were elderly people with signs and symptoms of chronic respiratory diseases. Further it was noted that most of them were retired workers of an asbestos factory.

1.1. Describe with reasons two study designs in the hierarchical order that would be appropriate to investigate the above public health problem.
(30 marks)

1.2. List five (05) possible bias associated with one of the study designs that you have mentioned in 1.1, when investigating the above public health problem
(15 marks)

1.3. State the specific measures that you would employ to minimize each of the above listed bias in 1.2 for each of the following stages of the study:

1.3.1. Planning (25 marks)

1.3.2. Data collection (20 marks)

1.3.3. Analysis (10 marks)

Contd.../2-

2. A study was conducted in Sri Lanka among a group of volunteer obese adult women. None of the women had been on a slimming diet for the past six months. On recruitment, these women were advised on a hypocaloric diet based on natural food with supplementation. Blood markers were measured and reassessed in 30 days.

The results obtained are shown on the table below

	Before weight loss programme (mean \pm SD)	After weight loss programme (mean \pm SD)
Plasma Glucose (mmol/l)	4.8 \pm 1.1	4.8 \pm 0.3
Free Fatty acids (μ mol/l)	543 \pm 95	476 \pm 89
Plasma Cholesterol (mmol/l)	5.2 \pm 0.4	4.9 \pm 0.4
Free T4 (pmol/l)	16.6 \pm 1.7	18.8 \pm 1.4

- 2.1. Interpret the distribution of the Plasma Glucose given in the above table
(20 marks)
- 2.2. List the most appropriate graphical presentation/s which describes the above table
(10 marks)
- 2.3. State with reasons whether Standard Deviation or Standard Error of Mean would be the most appropriate method of describing the above results
(20 marks)
- 2.4. List two (02) statistical tests that you would use to test the associations in the above table
(10 marks)
- 2.5. Explain the underlying assumptions and statistical reasons for the answer mentioned in 1.4
(40 marks)