

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (CHEMICAL PATHOLOGY) EXAMINATION – JUNE 2019

Date:- 24th June 2019

Time :- 1.00 p.m. – 4.00 p.m.

PAPER I (Analytical)

All four (04) questions to be answered.

Use a separate book for each of the **four (04)** questions.

All questions carry equal marks.

Write legibly.

1. Describe the analytical principle of **one (01)** appropriate method for the measurement of any **three (03)** of the following, including sample collection requirements and assay interferences where relevant.
 - 1.1. Lead
 - 1.2. Chromogranin A
 - 1.3. Lithium
 - 1.4. Ammonia

2. Write short notes on any **three (03)** of the following:
 - 2.1. Serum indices
 - 2.2. Commutability
 - 2.3. Biotin interference
 - 2.4. CSF xanthochromia

3. Using examples from your laboratory, discuss how enzymes can be used as reagents.

OR

Using **three (03)** examples from your laboratory, discuss the importance of standardization and harmonization of methods.

4. You have been asked to establish a point of care testing (POCT) service in the Intensive Care Unit (ICU).

What is the role of the laboratory in this process and what important aspects need to be considered?

OR

What are the components of an Internal Quality Control (IQC) programme in the laboratory and what mechanisms/procedures are available to ensure that assays remain in control?

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MD (CHEMICAL PATHOLOGY) EXAMINATION – JUNE 2019

Date:- 25th June 2019

Time:- 9.00 a.m. – 12.00 noon

PAPER II (Clinical)

All four (04) questions to be answered.

Use a separate book for each of the **four (04)** questions.

All questions carry equal marks.

Write legibly.

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1. Write short notes on the clinical significance of any **three (03)** of the following:
 - 1.1. Anti-Mullerian Hormone (AMH)
 - 1.2. Alpha-fetoprotein (AFP)
 - 1.3. Ferritin
 - 1.4. Homocysteine

 2. Write short notes on any **three (03)** of the following:
 - 2.1. Biochemical changes in menopause
 - 2.2. Maturity Onset Diabetes of the Young (MODY)
 - 2.3. HELLP syndrome
 - 2.4. Complications of Total Parenteral Nutrition (TPN)

3. A 45-year-old female presented with recurrent episodes of dizziness. A capillary blood glucose taken at the time was 42 mg/dL (2.2 mmol/L). Discuss the role of the Chemical Pathology laboratory in arriving at a diagnosis.

OR

You were contacted by a physician regarding a 52-year-old male who was found to have a serum triglyceride of 40 mmol/L on routine biochemical testing.

Discuss the possible causes and how you would help them arrive at a diagnosis.

4. Describe the clinical features and biochemical abnormalities caused by gastrointestinal endocrine tumors.

OR

Describe the biochemical investigations of severe hypertension in a young female.