



Faculty of Medicine University of Ruhuna
Third Examination for Medical Degrees (Part II) – April 2019

Forensic Medicine Paper I

Thursday 30th April 2019

9.00 am to 12.00 noon
Three hours

Answer **ALL FIVE** questions.

Answer each **PART** in a **SEPARATE** book.

Part A

1. A 25 year-old man who was alleged for narcotic drug abuse was in the police custody. He was found suspended with a ligature in the cell. A bed sheet was rolled and one end was knotted around the neck and the other end was tied on to an iron bar in the cell. The feet were touching the floor. The body was at the scene.
 - 1.1 Briefly describe the inquest procedure in this case. *(10 marks)*
 - 1.2 State 5(five) objectives of your scene visit examination. *(15 marks)*
 - 1.3 Describe the possible external findings you would expect to see on the body at the autopsy. *(25 marks)*
 - 1.4 List major steps of the dissection of the neck at the autopsy. *(15 marks)*
 - 1.5 State 3(three) important samples you would collect at the autopsy to confirm the allegation of drug abuse. *(10 marks)*
 - 1.6 How would you exclude the allegation of battering in the police custody of the deceased at the autopsy. *(25 marks)*

2. A 45 year-old woman was thrown acid by the neighbor while she was sweeping the garden. She felt severe pain over the face, neck and upper chest.
 - 2.1 What is the common acid which is used to assault in Sri Lanka? *(10 marks)*
 - 2.2 List 5(five) other agents which cause burns *(15 marks)*
 - 2.3 List 5(five) complications of burns. *(15 marks)*
 - 2.4 Describe the features of burn injuries you would expect to see in this patient. *(25 marks)*
 - 2.5 What are the different factors you would consider when you categorize the burn injuries of this patient. *(20 marks)*

The neighbour of the victim was charged for the offence in the courts. You were called to give evidence in the court.

 - 2.6 State how you get prepared to give evidence in the courts. *(15 marks)*

Part B

- 3.
- 3.1. A 21 year-old male singer collapsed while performing on a stage during a night party around 2.30 am. He was dancing and singing non-stop for the past 3-4 hours. He was taken to the nearby tertiary care hospital in an unconscious state. On admission, his blood pressure was 240/140 mmHg and his pulse rate was 120 beats per minute. He also had pyrexia. He developed fits at the hospital and died within 30 minutes of admission without regaining consciousness. Scene of Crime Officers found evidence of drug paraphernalia at the rest room of the singer, which includes empty bottles of beer, some tablets, suspicious powder packets and few syringes.
- 3.1.1 List 5(five) medico-legal issues of this case. *(10 marks)*
- 3.1.2 What is the most likely causative agent involved in this case? *(05 marks)*
- 3.1.3 List 5(five) other possible clinical features that you would expect to see in this patient? *(10 marks)*
- 3.1.4 Briefly outline how would you carry out the autopsy in a case of suspected drug related death? *(15 marks)*
- 3.1.5 List 3(three) possible mechanisms of death in this patient. *(10 marks)*
- 3.1.6 List 5(five) important samples that you are going to collect at the autopsy. *(5 marks)*
- 3.2. Police arrested a driver while he was trying to run away from a scene of road traffic accident. He was alleged to have knocked down a pedestrian who was crossing the road. The driver refused to take the breathalyzer test and the police have decided to produce him to the on call JMO for medico-legal examination.
- 3.2.1 List 3(three) instances where a suspect driver can be considered to be under influence of alcohol by the court of law. *(10 marks)*
- 3.2.2 List 5(five) medico-legal issues in this case. *(10 marks)*
- 3.2.3 Briefly discuss the advantages of the clinical examination of a drunken driver over breathalyzer test. *(15 marks)*
- 3.2.4 What are the possible samples that you would collect as the on call JMO in this instance? *(10 marks)*

Part C

4. The police received complaints from families of two youth who went missing for four weeks after being arrested allegedly by a mobile police unit for questioning. It was said that these two persons were involved in fishing industry and also drug trafficking.
- 4.1 State the legal definition of a "missing person" in Sri Lanka. *(10 marks)*

Subsequently it was revealed that these youth were taken to an abandoned house in a remote area and were tortured. The investigating police officers managed to identify the locus following inquiry of several accomplices to the incident. There were multiple trace evidences at the scene.

- 4.2 State 5 (five) advice you would give to Scene of Crime Officers (SOCO) prior to the Scene examination in this case. *(10 marks)*
- 4.3 Briefly describe the principles of collection, storage and dispatch of trace evidences in this case. *(10 marks)*
- 4.4 State the medical definition of torture. *(5 marks)*
- 4.4 Briefly discuss the legal provisions related to torture in Sri Lanka. *(15 marks)*

It was further revealed that both detainees succumbed to their injuries during interrogation and deceased bodies were transported to an unknown location and surreptitiously disposed. This location was later identified as a government owned forest reserve. Partially burnt multiple human bony remains were found during the scene examination. These remains include skull bones pelvic bones, long bones & multiple pieces of small bones.

- 4.5 Briefly describe how you would conduct the post-mortem examination of these remains. *(10 marks)*
 - 4.6 Briefly state how you would determine the causes of death in this case. *(10 marks)*
 - 4.7 Briefly describe how you would establish the age and sex of the missing persons in this case. *(15 marks)*
 - 4.8 Briefly discuss the limitations of your opinion and possible counter arguments that would be expressed in a future court case. *(15 marks)*
5. A 24 year-old youth was admitted to a tertiary care hospital following an incident of a fall from a height during a festival occasion. On admission to Emergency Trauma Centre, he was conscious and had minimal external injuries but was unable to move or stand on his own. He was said to be apparently healthy prior to the incident.
- 5.1 State 5(five) medico-legal issues of this case. *(5 marks)*
 - 5.2 Briefly describe your approach to analysis of injuries of a person who was alleged to be fallen from a height. *(15 marks)*

The neuro-surgical opinion was sought after initial stabilization of the patient. The neuro surgeon has decided to perform a major surgery of the lumbar spine two weeks after the fall. Initially the time period for the surgical procedure was calculated as three hours but eventually it was extended to nine hours. The consent for surgery was obtained from the patient on the Bed Head Ticket (BHT) in a single sentence and it was alleged that parents of the patient were not told about the surgical procedure or its possible outcome.

- 5.3 Briefly describe the full range of movements of the lumbar spine. *(10 marks)*
- 5.4 How should have been the consent for surgery appropriately obtained in this case? *(15 marks)*

The patient was sent to high dependency unit of the neuro-surgery ward following the surgery. His urine output gradually reduced and the neuro surgeon was not informed about his clinical deterioration. The patient died despite all resuscitative measures within first 24 hours of the post-operative period. An inquest into the death was ordered.

The parents complained to the Ministry of Health, Human Rights Commission & Sri Lanka Medical Council (SLMC) regarding negligence of care of the neuro surgeon and his ward staff prior to and after the surgery.

5.5 How would you establish negligence in this case? *(15 marks)*

5.6 Briefly state how SLMC will conduct its disciplinary inquiry in this case. *(15 marks)*

During the ministerial inquiry it was revealed that part of the BHT containing details of post-operative care and nurse's notes are missing from the original documents. The parents of the deceased have filed a complaint regarding loss of BHT documents at the Right to Information Commission.

5.7 State the legal definition of 'information' according to Right to Information Act in Sri Lanka? *(10 marks)*

5.8 Briefly discuss the effects of loss of BHT documents in relation to ethical principles that should be followed in a similar occasion. *(15 marks)*