



UNIVERSITY OF JAFFNA, SRI LANKA
SECOND EXAMINATION FOR MEDICAL DEGREES
PART-I FEBRUARY 2025

ACADEMIC YEAR - 2020/2021
FORENSIC MEDICINE-PAPER II

Date: 10.02.2025

9.00 am. to 12.00 noon(3 hours)

Answer all five (5) questions

Answer each part in a separate answer book

PART A

1. The Medical Officer of Health (MOH) and a midwife took a 2-year-old girl to the hospital after noticing several injuries on different areas of her body. According to the grandma, the mother had left the child with her the day before. The MOH started looking into the possibility of child abuse.
 - 1.1. Enumerate five (05) characteristic observations that could lead to suspicions of child abuse. (10 marks)
 - 1.2. Give a brief explanation of the three (03) typical skin injuries that occur in physical child abuse. (15 marks)
 - 1.3. Give a brief explanation of the three (03) typical bone injuries associated with physical child maltreatment. (15 marks)
 - 1.4. Enumerate five (05) illnesses that could resemble physical child abuse. (10 marks)
 - 1.5. When the child was admitted, the neurologist suspected shaken baby syndrome because of altered consciousness. Discuss about shaken baby syndrome briefly. (15 marks)
 - 1.6. The child was scheduled for discharge following treatment. discuss about your plans for the child's future safety, taking into account of social, legal, and medical wellbeing. (35 marks)
2. The investigating police officers called you, the medicolegal officer, to the site after discovering a 17-year-old schoolgirl hanging at her residence..
 - 2.1. Enumerate the five (05) important medicolegal concerns that are pertinent to this case. (10 marks)
 - 2.2. Give a brief explanation of the main goals of a crime scene investigation. (15 marks)

2.3. Enumerate the five (05) stakeholders who usually participate in a crime scene investigation. **(5 marks)**

2.4. Describe the importance of Lockard's Exchange Principle in forensic investigations. **(10 marks)**

2.5. Give a thorough explanation of the measures you would use to ascertain the cause and manner of death in this death. **(60 marks)**

PART B

3. Analyze critically Sri Lanka's present "Disposal of Death" system, both with and without an inquest. **(100 marks)**

4. A fifty-five (55) year-old gentleman was found dead at the road side near a pedestrian crossing on a Saturday morning. He was last seen at a party previous night. He is a known patient of hypertension and diabetes mellitus and he has twice been admitted to the hospital with a history of tightening chest pain and treated for unstable angina. The investigating police officers noticed a few abrasions on his body.

4.1. List five (05) medico-legal issues related to this case. **(10 marks)**

The police officers suspected road traffic trauma or a fall as the cause of death, while relatives strongly suspected foul play.

4.2. Discuss the autopsy features that favour the fall in this case. **(30 marks)**

4.3. Discuss the autopsy features that favour the road traffic trauma in this case. **(30 marks)**

4.4. List five (05) possible natural causes that could cause the death of this person. **(10 marks)**

4.5. Discuss the macroscopic and microscopic findings of the heart of this deceased during autopsy. **(20 marks)**

PART C

5. A 51-year-old prominent businessman was found unresponsive in the driving seat of his car parked inside a major cemetery in a metropolitan city on a weekday afternoon. According to one of his secretaries who reached the place first, a loosely positioned wire (antenna cord) was noted around his neck. A paper bag containing an unused pastry was also found in the front seat. He was quickly transported to the Accident Service of the nearest tertiary care hospital by the same vehicle and was diagnosed of having out of hospital cardiac arrest (OHCA).

- 5.1. State five (05) most likely causes of OHCA for this case. **(10 marks)**

The police were informed by the hospital authorities soon after the emergency procedures. The Scene of Crime Officer (SOCO) unit was instructed to carry out a full-scale crime scene examination alleging an attempted homicide.

- 5.2. State the law related to attempted homicide in Sri Lanka. **(5 marks)**

- 5.3. State five (05) advices that you would give to SOCO who are ready to deploy for scene examination of this case. **(10 marks)**

The businessman was resuscitated on admission and managed in the Intensive Care Unit (ICU) and died approximately 7 hours later at 10.30 p.m. on the same day. The autopsy was conducted on the next day afternoon at a fully equipped forensic unit. There were no obvious ligature marks on the neck and the body was devoid of any fatal injuries. The deceased had no significant history of natural diseases. Although the Police were of the view of alleged homicide pending investigations the said car was not sent to Government Analyst for scientific examination. The postmortem samples of the body were retained for toxicological analysis. However, the cause of death was given as
“1a. Ligature strangulation” by the consultant judicial medical officer (JMO) after the autopsy.

- 5.4. Briefly state five (05) steps of the standard procedure of examining the vehicle of this case for forensic evidence. **(15 marks)**

Three weeks after the autopsy, the Government Analyst reported that Cyanide was detected in stomach contents and femoral blood samples of the deceased. Subsequent to receiving a report from the Government Analyst, a revised cause of death was given in the full autopsy report submitted to the courts as stated below.

1a: Cerebral hypoxia/hypoxic brain injury

1b: cyanide poisoning (ingested with food)

2: Ligature strangulation (non-fatal)

The relatives were confused and unhappy with the two causes of deaths given and appealed to the investigating magistrate for a fresh inquiry. A panel of five consultant JMOs were appointed to reinvestigate the whole case.

- 5.5. State five (05) major challenges the panel of JMOs have to face during their reinvestigation of this case. **(10 marks)**

- 5.6. Briefly state the relevance of cyanide poisoning to this death. **(15 marks)**

It was revealed subsequently that 2 weeks after the autopsy, the consultant JMO who did the autopsy was already being investigated by Sri Lanka Medical Council (SLMC) for serious professional misconduct in relation to a different case and his registration was upheld for 2 years. The legal team appearing on behalf of the family members of the deceased further alleged that the consultant JMO who did the autopsy has acted negligently.

- 5.7. How would you establish negligence of the consultant JMO in this case? **(10 marks)**

- 5.8. State the essential components of “serious professional misconduct” according to SLMC. **(15 marks)**

- 5.9. Outline how SLMC would investigate the complaint made by the family members against the JMO. **(10 marks)**