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POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD FORENSIC MEDICINE EXAMINATION - JUNE 2024

Date: 7th June 2024

Time: 9.00 a.m. – 12.00 noon

STRUCTURED ESSAY QUESTION (SEQ) PAPER

Answer all six (06) questions.

Answer the questions in the space provided.

Index No:

Abbreviations**Judicial Medical Officer - (JMO)****Medico-Legal Report - (MLR)**

1. A 56-year-old male with weakness of the right lower limb due to childhood poliomyelitis, sustained injuries while travelling as a pillion rider on a motorcycle which collided with an oncoming lorry. After admission to a teaching hospital, the following injuries were detected.
 - a. Open comminuted fracture of left femur for which open reduction and internal fixation was done.
 - b. Closed fracture of left distal radius (Colles' fracture) for which reduction and application of POP was done.
 - c. Liver laceration with moderate haemoperitoneum which was managed with emergency laparotomy.

After the initial management described above, he discontinued treatment there and sought treatment from the National Hospital, Colombo where he was followed up at the orthopaedic clinic for one and half years. He was free of diabetes mellitus, hypertension or any other natural diseases.

The magistrate court case was concluded, and the lorry driver was found guilty of rash and negligent driving. The Medical Officer (medico-legal), who examined him during his admission to the teaching hospital, had submitted a (MLR) indicating the category of hurt as fatal in the ordinary course of nature.

Thereafter, the patient sued the driver for the damages he sustained following the accident. The District Court refers this patient to you, the Consultant JMO, 10 years following the accident to submit a MLR regarding his disabilities.

- 1.1. List five (05) documents you need to review, prior to preparation the MLR.
(05 marks)

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1.2. Outline the possible clinical findings of the limbs you would consider in order to corroborate the history given by the patient. (30 marks)

[illegible]

- 1.3. List three (03) referrals that you would carry out before preparing the MLR. Give reasons for your answer. (25 marks)

	Referral	Reason/s
1		
2		
3		

- 1.4. With regards to this case, briefly explain the mechanism of causation of;

1.4.1. Colles' fracture of left hand. (10 marks)

1.4.2. Fracture of left femur. (10 marks)

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- 1.5. Critically analyze the limitations of applying the Workman's Compensation Act when submitting your conclusions in the MLR in this case. (20 marks)

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[illegible]

2. The police inform the consultant JMO that a 23-year-old woman has been found dead inside her house. You are the consultant JMO and the police requested you to attend the scene. When you attend the scene at 6 pm on the same day, you observe a slim body lying on a cement floor in supine position clad in a nightdress and a housecoat.
- 2.1. Outline the procedure to be followed to estimate the time since death by cooling method. (10 marks)
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- 2.2. The environmental temperature in the room was 28⁰ C and the initial temperature of the body recorded at the scene was 34⁰ C. Rigor mortis was present in the entire body, except the fingers and toes. Hypostasis was fixed on the posterior aspect of the body.

Briefly explain, giving your assumptions and reasons, how you would calculate the approximate time of death in this case. (20 marks)

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- 2.3. List five (05) other medico legal issues to be addressed in this case and state two (02) relevant observations you wish to make at the scene, for each issue. (20 marks)

Medico legal issues		Observations
1		
2		
3		
4		
5		

- 2.4. Briefly describe how you would collect and preserve five (05) samples during the autopsy in this case. (15 marks)

	Method of collection of sample	Method of preservation
1		
2		
3		
4		
5		

A series of horizontal dotted lines for writing.

This image shows a full page of primary-ruled paper. It features ten sets of horizontal dotted lines, each set consisting of three dots. These lines are evenly spaced across the entire page, providing a guide for handwriting practice. The background is white, and there are no margins or other markings present.

3. A 24-year-old woman was brought to the emergency treatment unit with high fever and per-vaginal bleeding for two days. On admission, she was in a state of cardiovascular collapse. The condition deteriorated in spite of attempts to resuscitate, and she was pronounced dead three hours following admission. The relatives were not happy about the management. An inquest was ordered, and the body was brought for autopsy. According to the clinical records, the differential diagnosis was dengue haemorrhagic fever and leptospirosis.

- 3.1. Briefly discuss the challenges you would face in differentiating dengue haemorrhagic fever and leptospirosis during the postmortem examination.

(15 marks)

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- 3.2. At the end of the autopsy you have concluded the cause of death as sepsis due to mechanical interference with pregnancy. Briefly describe the findings (gross examination and ancillary tests) that may have led to this conclusion.

(15 marks)

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- 3.3. When the cause of death was disclosed, the relations were reluctant to accept it, and they alleged negligence during medical management and petitioned the magistrate. The magistrate decided to obtain a second opinion from another Consultant JMO based on the available reports.

List four (04) medico-legal issues that need to be addressed by the second expert. (10 marks)

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- 3.4. The second JMO was provided with medical records, the autopsy report of the first pathologist, the photographs obtained at autopsy, and the microscopic slides prepared.

Briefly discuss the challenges faced by the second expert in addressing the issues mentioned in 3.3. (35 marks)

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[illegible]

- Briefly discuss how you would classify this death, according to the WHO classification of maternal deaths considering all the findings. (25 marks)

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- [illegible]

[illegible][illegible]

[illegible][illegible]

- 5.1. Briefly discuss the ethical issues related to this case. (25 marks)

[illegible]

- 5.2. The brain death was confirmed on the 2nd day of admission. Transplant coordinator started the process for organ donation. Outline the role of the JMO in this situation. (10 marks)

[illegible]

- 5.3. Following retrieval of kidneys and liver, the autopsy was performed with a Magistrate order.

Briefly discuss how you would assist the judiciary to ascertain the circumstances of this death based on the possible autopsy findings. (30 marks)

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- 5.4. Briefly explain the significance of microscopic examination of the brain to address three (03) important medico legal issues of this case. (20 marks)

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5.5. Outline the different types of euthanasia practiced globally. (15 marks)

[illegible]

6. A girl who is said to be 19 years was admitted to a teaching hospital by her 25-year-old unmarried partner who is said to be a drug addict. She presented with ulcers of the perineum and was referred to the consultant venereologist, who diagnosed herpes simplex and treatment was started. She was referred to a consultant obstetrician and gynaecologist as she was 14 weeks pregnant.

She was produced to a JMO with a medico legal examination form. The JMO detected that her partner had added four years to her exact age and given an incorrect name at the time of admission.

The history revealed that her father had left the family since her pre-school years. She had been with the maternal grandmother since her mother went abroad 2 years ago. The girl has been living with the partner for the last eight months.

- 6.1. List five (05) medico-legal issues of this case and briefly mention the steps to be taken to address these issues. (25 marks)

No	Medico Legal issues	Steps to be taken
1		
2		
3		
4		
5		

- 6.2. The girl was referred to a consultant psychiatrist who had revealed that she had no psychological consequences of trauma she has undergone since her childhood. Her mental age is compatible with that of a 12-year-old child and intelligence quotient (IQ) is 60.

State an important additional information that you would request from the psychiatrist which would be required for future court procedures.

(10 marks)

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- 6.3. At the institutional case conference it was decided to place the girl in an institution for pregnant mothers.

Outline five (05) instructions that should be given to the officer in-charge of the institution regarding the management of this girl. (25 marks)

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- 6.4. The court had ordered to place the girl in an institution for pregnant mothers until the delivery. The house officer seeks your opinion regarding the completion of the diagnosis card and other procedures before sending the girl to the institution.

State ten (10) instructions that you will give.

(40 marks)

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