



POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (FORENSIC MEDICINE) EXAMINATION (2017 PROSPECTUS)
(RE-SCHEDULED) – MAY 2022

Date:- 5th May 2022

Time:- 9.00 a.m. – 12.00 noon

SEQ PAPER

Index No.

Answer **all six (06)** questions.
Answer the questions in the space provided.

1.1. List ten (10) medico-legal objectives when you investigate a dead body with firearm injuries. (20 marks)

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1.2. Name five (05) types of guns used in homicides. (05 marks)

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1.3. Explain giving three (03) examples what you understand by "atypical" entrance and exit wounds. (15 marks)

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1.6. A man sustained an injury to the thigh after a police shooting. As the Judicial Medical Officer, you have examined this man three days after the incident in the surgical ward.

Explain how you would determine the category of hurt in this case. (20 marks)

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1.7. List five (05) mechanisms of death after receiving a firearm injury to the chest. (10 marks)

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2. A young female was found unconscious in the backyard. She succumbed to the condition two days after admission despite treatment. Trauma or foul play has been excluded.

The following questions are based on the above scenario.

2.1. Non-contrast computerized tomography of the brain (NCCT Brain) of the above patient revealed a basal subarachnoid hemorrhage, and an ultrasound scan of abdomen showed bilateral polycystic kidneys.

2.1.1. List two (02) natural causes for a basal subarachnoid haemorrhage. (06 marks)

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2.1.2. State the steps in the procedure you would adopt during dissection of the brain. (15 marks)

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2.1.3. Outline three (03) possible difficulties you may encounter during the above procedure. (09 marks)

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2.2. If a NCCT brain scan showed a large intracerebral hemorrhage near the left basal ganglia and an intraventricular hemorrhage in this patient instead of the previous NCCT findings given in 2.1,

2.2.1. state three (03) underlying pathological conditions which could have caused the above findings described in 2.2. (06 marks)

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2.2.2. outline the pathophysiology of the commonest condition out of the three (03) mentioned in 2.2.1. (14 marks)

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2.2.3. enumerate the macroscopic findings of the heart and kidneys in the condition mentioned in 2.2.2. (20 marks)

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2.2.4. outline the steps in fixing the brain if it is deemed necessary to dissect the fixed brain. (10 marks)

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2.3. If a NCCT brain scan showed nonspecific changes other than severe cerebral oedema, a full blood count with high white blood cell (WBC) count with neutrophilia, and a very high C-reactive protein (CRP) level,

2.3.1. outline the expected macroscopic and microscopic autopsy findings of the brain. (15 marks)

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2.3.2. state a non-histopathological investigation to confirm the diagnosis. (05 marks)

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3. A 45-year-old male was found unresponsive on bed in supine position on a partially burnt mattress and a pillow. Recovery team arrived and confirmed death and the police was informed.

You were called upon to attend to this case as the Judicial Medical Officer of the area.

- 3.1. State five (05) main objectives to be achieved in this scene visit and indicate the steps you would follow in order to achieve them. (20 marks)

	Objective	Step
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4. A 20-year-old driver of a motor car was arrested following a motor vehicular collision which caused minor injuries to a pedestrian. The pedestrian was treated at the out-patient department (OPD) of a hospital and the driver was produced for medico-legal examination.

4.1. State three (03) objectives of the medico-legal examination of this driver. (10 marks)

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Although the driver has consented, he was agitated and uncooperative for the medico-legal examination. Without any further action, the doctor instructed the police to produce the driver again once he calms down.

The police produced the driver to another doctor 6 hours later. The driver disclosed that he had been consuming abusive drugs including 'ICE' for the last 3 years.

4.2. State the generic name for 'ICE'. (05 marks)

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4.3. Outline how you would confirm that this patient had consumed 'ICE' recently. (15 marks)

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- 4.4. Outline five (05) recommendations/instructions you would provide to the police based on the examination and investigation findings in this case. (20 marks)

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The doctor handed over the completed medico-legal examination form (MLEF) to the police and the driver was taken back to the police station. The following morning, he was found dead in the police cell. The autopsy revealed a ruptured spleen with 1500 ml of blood in the peritoneal cavity.

- 4.5. List three (03) possible circumstances for the splenic rupture in this case. (15 marks)

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- 4.6. Name two (02) special dissection techniques you would perform in this case. (05 marks)

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5. A young man was found dead in his house in the washroom, with multiple injuries. A pointed knife with double cutting edges and a vegetable knife were recovered from the scene.

Autopsy revealed two stab wounds of the chest and three stab wounds of the abdomen. Two stabs of the chest showed bilateral acute angled ends. Two defects in the blood-stained shirt of the victim worn at the time corresponded in size and shape to the stabs on the chest though they were at a significantly lower level than the two stab wounds on the chest.

Each stab wound of the abdomen had one acute and a squared-off end.

5.1. Discuss the opinions you would express regarding the causation of these stab injuries. (20 marks)

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5.2. Express your opinion regarding the discrepancy between the level of stab wounds in the chest wall and the level of the defects of the shirt worn by the victim. (20 marks)

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5.3. One stab has gone through the right ventricle of the heart. 300 ml of blood was detected in the pericardial cavity and 200 ml of blood in right chest cavity.

Write the cause of death as you would write in the standard manner in the post-mortem report form. (15 marks)

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6. A 13-year-old boy and an 11-year-old girl were alleged to have engaged in a sexual activity. Acting on the complaint by the girl's mother, both were produced by the police before a Judicial Medical Officer for medico legal examination.

6.1. Name the law which addresses the protection of victims of crime in Sri Lanka. (05 marks)

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6.2. Outline three (03) provisions in the above law relevant to the responsibilities of the Judicial Medical Officer towards the victim, during the medico-legal management of this case. (15 marks)

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6.3. On examination of the genitalia of the girl, a reddish tender area was observed over the navicular fossa.

State the four (04) possible inferences you would make on this type of lesion. (10 mark)

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6.4. Outline how you would further examine and investigate this girl, and interpret your findings to formulate medico-legal opinion. (15 marks)

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6.5. Outline the provisions of the Sri Lankan law related to culpability of criminal offences applicable to the boy in this case. (15 marks)

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6.6. Outline the current standard procedure in place to evaluate the maturity of understanding of the boy to determine the criminal responsibility. (10 marks)

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6.7. State the steps you would take to determine the circumstances which could have led to this behaviour of the 13-year-old boy and facilitate the administration of justice. (15 marks)

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6.8. Outline five (05) important elements that you would address to create a victim-friendly environment in the examination facility of a medico legal unit. (15 marks)

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