

Third Professional MBBS Part I Degree Regular/Supplementary Examinations
January 2026
Forensic Medicine and Toxicology
(2019 Scheme)

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

1. Multiple Choice Questions**(20x1=20)**

The MCQ questions (Q.No. i to Q.No. xx) shall be answered **only in the OMR sheet provided at page No. 51** of the answer book (the inner portion of the back cover page (PART III)). Responses for MCQs marked in any other part/page of the answer book will not be valued. **For marking the correct responses use X mark only**

Question numbers i-v are case scenario- based questions

A 45-year-old businessman was found unconscious in a hotel room and brought dead to hospital. Autopsy revealed bright red discoloration of postmortem staining and faint smell of almond in the stomach contents. Liver showed fatty degeneration

- i. The postmortem findings are characteristic indicators of which toxic substance
 - a) Arsenic b) Cyanide c) Strychnine d) Methanol
- ii. What is the primary mechanism of this toxic substance in the body
 - a) Inhibition of acetylcholinesterase activity c) Inhibition of cytochrome oxidase in mitochondria
 - b) Interference with oxygen transport in hemoglobin d) Damage to liver enzymes
- iii. The presence of fatty degeneration in the liver suggests:
 - a) Chronic alcohol use by the victim c) A long-term poisoning attempt
 - b) Direct effects of cyanide on liver cells d) Liver failure as the primary cause of death
- iv. The specific viscera to be preserved in this condition
 - a) Heart b) Brain c) Lungs d) Spleen
- v. The duty of the doctor in casualty is to:
 - a) Inform police c) Ask the relatives of the deceased to report to hospital
 - b) Inform hotel manager d) Ask the hotel staff to stay in hospital

For questions vi - x, there are two statements marked as Assertion (A) and Reason (R). Mark your answers as per the options provided:

- a) Both A and R are true and R is the correct explanation of A c) A is true but R is false
- b) Both A and R are true and R is not the correct explanation of A d) A is false but R is true
- vi. **Assertion (A):** Ventricular fibrillation is the most common cause of death in electrocution.
Reason (R): The paraffin test detects nitrates and nitrites from gunpowder residue.
- vii. **Assertion (A):** Delusion of persecution is seen in mental illness
Reason (R): Delusion is due to disturbance of consciousness and orientation
- viii. **Assertion (A):** Viper bites are associated with bleeding diathesis.
Reason (R): Marsh test detects arsenic through the production of arsine gas.
- ix. **Assertion (A):** Contre-coup injury is the brain injury occurs opposite to the site of impact
Reason (R): Contre-coup injury is due to diffuse axonal injury occurs in a static head
- x. **Assertion (A):** Pubic symphysis is used to determine age in adults.
Reason (R): The pubic symphysis undergoes predictable changes with advancing age.

Question numbers xi-xv are multiple-response type questions. Read the statements & mark the correct answers appropriately.

- xi. Which of the following factors favours adipocere formation
 - 1) Warm, moist environment 2) Presence of fatty tissue
 - 3) Foetus less than 7 months of intrauterine age 4) Air current and wind
 - a) 1 and 2 are correct b) 3 and 4 are correct c) 1, 2 and 3 are correct d) 1, 3 and 4 are correct
- xii. A doctor during surgery accidentally left a mop inside abdomen cavity
 - 1) It amounts to vicarious liability 2) It amounts to criminal negligence
 - 3) It amounts to therapeutic misadventure 4) It is 'res ipsa loquitur'
 - a) 1 and 2 are correct b) 3 and 4 are correct c) 1, 2 and 3 are correct d) 1, 3 and 4 are correct
- xiii. Which of the following are clinical findings in death due to starvation
 - 1) Atrophied stomach with bile staining 2) Empty gall bladder
 - 3) Loss of subcutaneous fat 4) Atrophy of liver and spleen
 - a) 1 and 2 are correct b) 3 and 4 are correct c) 1, 2 and 3 are correct d) 1, 3 and 4 are correct

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- xiv. Which of the following findings are seen in methanol poisoning
 1) Blindness due to optic nerve damage 2) Metabolic acidosis
 3) CNS depression 4) Hypoglycemia
 a) 1 and 2 are correct b) 3 and 4 are correct c) 1, 2 and 3 are correct d) 1, 3 and 4 are correct
- xv. Which of the following are features of antemortem burns
 1) Soot in the airways 2) Line of redness around burn wounds
 3) Vesicles with dry hard yellow base 4) Pugilistic attitude
 a) 1 and 2 are correct b) 3 and 4 are correct c) 1, 2 and 3 are correct d) 1, 3 and 4 are correct

Question numbers xvi-xx are single-response type questions.

- xvi. 'Burking' is
 a) Traumatic asphyxia and smothering c) Gagging and smothering
 b) Ligature strangulation d) Manual and ligature strangulation
- xvii. Contra indication for stomach wash is poisoning with:
 a) Alcohol c) Kerosene
 b) Opium d) Organophosphorous compound
- xviii. The basilar suture of the skull is useful in determining:
 a) Time since death b) Sex of the individual c) Age of the individual d) Ancestral origin
- xix. A 6 year school child developed acute appendicitis during a picnic program needed surgery. Teacher accompanied her gave the consent for the procedure. This comes under which of the following
 a) Paternalism c) Emergency doctrines
 b) Locoparentis d) Blanket consent
- xx. Weapon cost the injury can be identified in all the following, **EXCEPT**
 a) Tramline contusion c) Imprint abrasion
 b) Ectopic contusion d) Depressed fracture of skull

Long Essays:

(2x10=20)

2. Dead body of a 35 year old man was found inside the car parked in garage with engine on position. Autopsy revealed cherry red discoloration of postmortem staining and oedematous and softened brain. Rigor mortis started passing off from upper part of the body and greenish discoloration seen on lower abdomen.
 a) State your opinion as to cause of death and explain
 b) Estimate the time of death stating reasons
 c) Discuss its pathophysiology and management, if brought to hospital alive
 d) Plan preventive strategy for this situation (3+3+2+2)
3. Body of a 25 year old lady was found unconscious in her bedroom with a punctured wound on front of chest. X-ray examination revealed a metallic particle in chest. A foetal skeleton seen in her uterus
 a) What could be probable cause of injury.
 b) Describe the medico-legal duties of doctor in handling such cases in casualty
 c) How can you differentiate whether it is entrance wound or exit wound
 d) Explain the method to assess the age of the foetus (3+2+3+2)

Short Essays:

(6x6=36)

4. Explain the procedure and significance of dying declaration in a medico-legal case.
5. Discuss the effects of chronic alcoholism on various organs in the body with respect to CNS, CVS and GIT and their medico legal significance.
6. Explain the concept of rigor mortis and its medico-legal importance.
7. Relatives of patient alleged that doctor has caused negligence. Explain the essential components of such cases and the defences of doctor in such cases. (2+4)
8. Describe the differences of lungs in still born and live born baby. Briefly explain about hydrostatic test and its fallacies and medico-legal significance. (2+2+2)
9. Define abrasions. Describe different types of abrasions. Summarizes the medico-legal significance of abrasion with special note on its age. (1+2+2+1)

Short Answers:

(6x4=24)

10. 30 year old woman charged as accused in a cognizable offence is brought for medical examination by police. She refuses to give consent for examination. The doctor examined the subject using force. Critically analyse the act of doctor
11. Define summons. Explain the procedure that can be adopted, if you receives summons from different courts to appear on a particular day. (2+2)
12. Briefly describe the powers of state medical council.
13. Discuss carbouluria and state its significance.
14. Differentiate between true and feigned insanity.
15. Draw and label findings in head and neck in case of ligature strangulation.

CORRECTION / NO-CORRECTION FILE
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QPCODE: 313001

Dated: 09-01-2026

Question No.1 (ii)

Modified as "What is the primary mechanism of action of this toxic substance in the body."

Question No.1 (ix)

Modified as "Assertion (A): Contre-coup injury is the brain injury that occurs opposite to the site of impact

Reason (R): Contre-coup injury is due to diffuse axonal injury that occurs in a static head"

Question No.1 (xi)

The word 'favours' corrected as "favour"

Question No.1 (xii)

Modified as "A doctor during surgery accidentally left a mop inside abdominal cavity

- 1) It amounts to vicarious liability 2) It amounts to criminal negligence**
3) It amounts to therapeutic misadventure 4) It is 'res ipsa loquitor'

- a) 2 and 4 are correct**
b) 1 and 4 are correct
c) 1, 2 and 3 are correct
d) 1, 3 and 4 are correct

Question No.1 (xx)

The word 'cost' corrected as "caused"

Question No.2

The word 'oedmatous' corrected as "oedematous"

Option b) is corrected as "Estimate the time since death stating reasons"

Question No.9

The word 'Summarizes' corrected as "Summarize"

Question No. 11

The word 'receives' corrected as "receive"

Corrections/Modifications/Replacement of Questions if any shall be made available to all students. Take the print out of the Correction File in such cases and distribute to all students.

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CONTROLLER OF EXAMINATIONS