

Question Paper

Exam Date & Time: 15-Dec-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD PROFESSIONAL YEAR MBBS PART I DEGREE EXAMINATION - DECEMBER 2023
SUBJECT: FORENSIC MEDICINE & TOXICOLOGY
(CBME BATCH - REGULARS)

Marks: 100

Duration: 180 mins.

Section Duration: 20 mins

- 1) After an electrocution incident, a person was presumed dead. However, the patient could be resuscitated. This resuscitation was possible because the patient had been in a state of (1)

[Cortical death](#)
[Locked in syndrome](#)
[Mummification](#)
[Suspended animation](#)

- 2) A patient died following a head injury from a road traffic accident. The most likely MODE OF DEATH in this case would be (1)

[Asphyxia](#)
[Coma](#)
[Cardiorespiratory arrest](#)
[Syncope](#)

- 3) In a body with postmortem lividity prominent over the knees and front of the legs, the type of hanging is likely to be (1)

[Atypical](#)
[Complete](#)
[Partial](#)
[Typical](#)

- 4) In a densely packed open air music concert, a fire caused panic resulting in a rush to leave. Four people died. The most likely cause of death in this case would be (1)

[Carbon monoxide poisoning](#)
[Crush asphyxia](#)
[Hydrocution](#)
[Suffocation](#)

- 5) In the absence of a body, a person was convicted of murder based on the crime scene evidence. The legal doctrine that led to the conviction is based on (1)

[Corpus delicti](#)
[Habeas corpus](#)

[Res ipsa loquitor](#)
[Res judicata](#)

- 6) A man was arrested for exposing his genitalia to members of the opposite sex. The condition that best describes this behaviour among the following is (1)

[Exhibitionism](#)
[Frotteurism](#)
[Masochism](#)
[Voyeurism](#)

- 7) An accused in a case of sexual assault is unwilling to be examined. The following section can be applied to proceed with examination without consent: (1)

[53 A CrPC](#)
[164 A CrPC](#)
[166 B IPC](#)
[375 IPC](#)

- 8) The following is TRUE regarding vicarious liability: (1)

[Forms a part of corporate negligence](#)
[Is a defence against medical negligence](#)
[Patient is entitled to more compensation](#)
[Part of the doctrine of Respondeat Superior](#)

- 9) A patient willingly undergoes a new procedure knowing that there is a high likelihood of failure and complications. The doctor is protected by the following doctrine (1)

[Beneficence](#)
[Patient autonomy](#)
[Professional discretion](#)
[Therapeutic misadventure](#)

- 10) The following is a type of disciplinary action that can be taken against a doctor for infamous conduct (1)

[Court stricture](#)
[Imprisonment](#)
[Penal erasure](#)
[Warning notice](#)

- 11) In cases where death in police custody takes place, an additional copy of the postmortem report is to be sent to the (1)

[District magistrate](#)
[State Human rights commission](#)
[State Medical Council](#)
[National Human rights commission](#)

- 12) The following is TRUE regarding Negligence (1)

[Balance of probability doctrine is used in criminal negligence](#)
[Beyond reasonable doubt doctrine is used in civil negligence](#)
[Damage is awarded by the consumer courts](#)
[Negligence cases can be tried in both consumer and criminal courts](#)

13) A person believes that everyone on the internet is talking about her because of which she is unable to work. The most likely delusion described here is of (1)

[Grandeur](#)

[Nihilism](#)

[Persecution](#)

[Reference](#)

14) A person is feigning insanity to avoid punishment in court. The following feature is most likely to reveal his sound mind (1)

[He is well rested and well-kempt](#)

[His behaviour is consistent throughout the day](#)

[His signs and symptoms were present before the alleged incident](#)

[There was a gradual onset of signs and symptoms](#)

15) A relative of a mentally ill patient claims that the "Will" drafted by the patient should be considered valid. Which of the following points will help him prove his case? (1)

[It has been attested](#)

[It is a holograph "Will"](#)

[The "Will" has witnesses' signatures](#)

[The "Will" was made during a lucid interval](#)

16) An accused is using Section 84 of the IPC as a defence for his crime. Which of the following would prove his defence invalid? (1)

[Could not resist doing the crime](#)

[Did not know that it was illegal](#)

[Did not know what it was that he was doing](#)

[He was suffering from unsoundness of mind](#)

17) Due to contamination of well water, residents of a village started developing hyperkeratosis and neuropathies. The most likely contaminant is (1)

[Arsenic](#)

[Copper](#)

[Polonium](#)

[Thallium](#)

18) After consuming some local root plant, a person starts experiencing burning sensation in the mouth and on admission is found to have cardiac arrhythmias. The features are due to (1)

[Aconitine](#)

[Atropine](#)

[Nerin](#)

[Thevetin](#)

19) After two days of exposure to a poisonous substance, the patient develops additional signs of muscle weakness with paralysis and motor cranial nerve palsies. The poisonous substance is (1)

[Paraquat](#)

[Pyrethroid](#)

[Organophosphate](#)

Zinc phosphide

- 20) Workers in a plastics and pesticide factory one day start experiencing cough with bloody expectoration and blurry vision. In the hospital, investigations show pulmonary oedema. At around the same time, some of the pregnant workers had miscarriages. The likely culprit is (1)

Carbon monoxide

Methane

Methyl iso-
cyanate

Sulphur dioxide

Answer ALL questions.

Essay :

1) A 24-year-old male presents to the casualty of a hospital with the following salient findings: Multiple linear injuries, of varying dimensions, with the length being the longest dimension, present over the front of the hands and back of the forearms. The margins of these injuries are clear cut exposing the tendons of the hands and muscles of the forearms. On being asked, the person says that he was assaulted. Based on this history, answer the following questions:

- 1A) How will you ascertain the most likely type of weapon that caused the injuries? (2)
1B) Explain how you would classify the injuries seen in this case with the differential diagnosis? (4)
1C) Explain the inference that can be drawn based on the position of the wounds on the front and back as mentioned above. (4)

2) A villager starts complaining of vision disturbances and is eventually brought to the hospital in an unconscious state. Family members say he had been consuming locally made liquor over the past few days. Based on this history, answer the following questions:

- 2A) Explain what could have been the most likely cause for his condition. (2)
2B) How would you manage this patient? (4)
2C) In case of death of the patient, what could be the autopsy guidelines? (4)

3) Write briefly:

- 3A) A witness for the defence, when in court, is not answering the questions put to him, and some of the answers given by him are helping the prosecution. Explain the forensic medicine principle depicted and the reasons for the behaviour of the witness. (4)
3B) A victim of assault, who is unlikely to survive wants to make a statement regarding the circumstances of his assault and likely death. Explain the forensic medicine principle involved and the role of a doctor in this case. (4)
3C) A dead body is found with grass clutched in its hands. The fingers of this hand cannot be opened as easily as the fingers of the other hand. Explain the forensic medicine principle involved and its differential diagnosis (4)
3D) A case of sudden death has been brought for autopsy following complaints of chest pain. How will you proceed with dissecting the heart to look for a cardiac cause of death? (4)
3E) How will you go about proving a case of antemortem hanging based on autopsy findings? (4)
3F) How will you determine the race of an individual from the skull? Explain with applicable forensic (4)

methods.

- 3G) A person has been admitted to the hospital with fracture of the right humerus following assault. (4)
Explain the IPC section(s) that can be applied to this case with reasons.
- 3H) How will you proceed with determining whether a pregnancy is definitive, presumptive, or probable? (4)
- 3I) What findings will help to prove a case of sodomy? (4)
- 3J) How do you ensure that consent taken for an invasive surgical procedure is valid? (4)
- 3K) Discuss the situations that allow a doctor to divulge patient information. (4)
- 3L) A doctor has been accused of negligence. What are the various defences available to him to shield (4)
himself from the accusation?
- 3M) A doctor is afraid that divulging certain information to the patient may result in him becoming (4)
uncooperative and unlikely to undergo treatment. Explain the Forensic Medicine principle that the
doctor can apply here.
- 3N) A patient is admitted with alleged cyanide poisoning. Explain the treatment and antidote in this case (4)
- 3O) The treating doctor believes that he, rather than the patient is in the best position to decide the (4)
management of the patient. Explain briefly the principle being depicted here and contrast it with
autonomy.

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