

INI CET Forensic Medicine

Sample Paper – 6

Duration: 14 Minutes

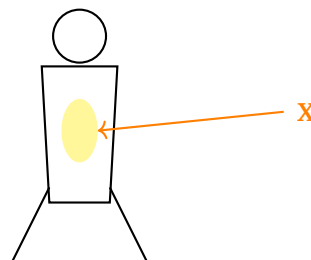
Maximum Marks: 15

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the Forensic Medicine content of **INI CET** (Institutes of National Importance Combined Entrance Test) conducted by AIIMS New Delhi.
- The **15-question** length matches the number of Forensic Medicine items you actually meet in the real 200-question paper.
- Each correct answer carries **+1 mark**. There is **negative marking of one-third (0.33) mark** for every incorrect answer; unattempted questions carry no penalty.
- Every question has **exactly one best answer**. Choose the single most appropriate option.
- Attempt this practice paper in one timed sitting of about **14 minutes**, the pace the real computer-based test demands.

Thanatology

Q1. A body recovered from a warm, moist, waterlogged pit shows a greasy, waxy substance replacing the subcutaneous fat (marked X), formed by hydrolysis and hydrogenation of body fat. This post-mortem change is:



- (A) Mummification
(B) Maceration



- (C) Adipocere
- (D) Skeletonisation

Q2. Mummification, the dehydration and shrivelling of a body with preservation of features, is favoured by which set of conditions?

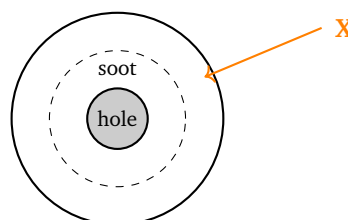
- (A) Cold, humid, waterlogged surroundings
- (B) Dry air, good ventilation and a high ambient temperature
- (C) A sealed, humid coffin
- (D) Rapid submersion in cold, still water

Q3. Both adipocere and mummification carry medico-legal importance chiefly because they:

- (A) Preserve the facial features and injuries, aiding identification and estimation of time since death
- (B) Accelerate skeletonisation of the body
- (C) Prove that the cause of death was drowning
- (D) Always appear within six hours of death

Mechanical Injuries

Q4. The firearm entry wound shown has a central hole, a surrounding zone of blackening (soot), and an outer zone of tattooing (marked X), together with singeing of adjacent hair. This combination indicates a shot fired at:



- (A) A distant range (well beyond arm's reach)
- (B) A hard-contact range with muzzle imprint
- (C) A close (near) range of a few centimetres to about 60 cm



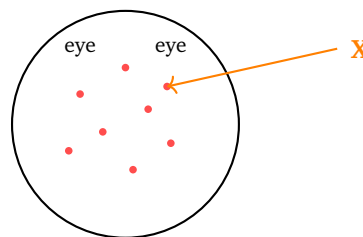
(D) An indeterminate range that cannot be assessed

Q5. Which feature of a firearm entry wound is seen only with a contact or very close discharge and disappears as the range of fire increases?

- (A) Singeing (burning) of hair with a burnt, scorched zone at the margin
- (B) A roughly circular entry hole
- (C) An abrasion (contusion) collar around the defect
- (D) Inverted wound margins

Asphyxial Deaths

Q6. The pinpoint haemorrhages shown scattered over the face, conjunctivae and behind the ears (marked X) in an asphyxial death are known as:



- (A) Post-mortem lividity spots
- (B) Tardieu spots (petechial haemorrhages)
- (C) Lichenification
- (D) Ante-mortem contusions

Q7. Which set of findings constitutes the classic general (non-specific) signs of asphyxia at autopsy?

- (A) Pallor of organs, firm clotted blood and a contracted right heart
- (B) Rigor mortis, cadaveric spasm and cutis anserina only
- (C) Dry mucosae with uniformly pale viscera
- (D) Cyanosis, visceral congestion, petechial haemorrhages and fluidity of the blood

Forensic Identification and Medical Jurisprudence



Q8. A dying declaration is ideally recorded by:

- (A) A magistrate, but in an emergency any person, including the attending doctor, may record it
- (B) Only a police officer of or above the rank of inspector
- (C) Only a forensic pathologist, after the person has died
- (D) Two independent eyewitnesses, and never a doctor

Q9. Regarding a dying declaration in India, which statement is correct?

- (A) The declarant must be placed on oath before it is recorded
- (B) No oath is administered, and it can form the sole basis for conviction if the court is satisfied it is true and voluntary
- (C) It is inadmissible unless corroborated by at least two witnesses
- (D) It is valid only if the person survives the injury

Q10. Before a dying declaration is recorded, the essential role of the attending doctor is to:

- (A) Cross-examine the declarant about the incident
- (B) Delay recording until the investigating police arrive
- (C) Administer an oath to the declarant
- (D) Certify that the person is conscious and mentally fit (compos mentis) to give the statement

General Toxicology and Corrosive Poisons

Q11. Acrodynia (pink disease), with painful, pink, swollen and desquamating extremities in children, is a manifestation of chronic exposure to:

- (A) Lead
- (B) Arsenic
- (C) Mercury
- (D) Copper



- Q12.** The specific chelating antidote for acute corrosive mercury poisoning is:
- (A) Atropine
 - (B) BAL (dimercaprol, British Anti-Lewisite)
 - (C) Naloxone
 - (D) Sodium thiosulphate

Specific Poisons

- Q13.** Binges of use (“runs”) followed by a “crash”, intense psychological dependence, and perforation of the nasal septum on chronic snorting are characteristic of abuse of:
- (A) Cannabis
 - (B) Heroin
 - (C) Cocaine
 - (D) Barbiturates
- Q14.** Bhang, ganja and charas are preparations of Cannabis. Its principal psychoactive constituent is:
- (A) Cocaine hydrochloride
 - (B) Morphine
 - (C) Ephedrine
 - (D) Tetrahydrocannabinol (THC)
- Q15.** Amphetamine, a sympathomimetic drug of abuse, characteristically produces:
- (A) Central stimulation with alertness, insomnia, hypertension and a risk of psychosis
 - (B) Marked miosis with respiratory depression
 - (C) Profound bradycardia and hypothermia
 - (D) Increased salivation and lacrimation



Detailed Solutions**Q1.****Solution**

Concept – late post-mortem changes: The surroundings decide which change a body undergoes.

Step 1 – read the setting: A warm, moist, waterlogged environment favours **adipocere** formation.

Step 2 – mechanism: Body fat undergoes hydrolysis and then hydrogenation into a greasy, waxy material (mostly palmitic, stearic and oleic acid salts).

Why the other options are wrong:

- A, mummification: needs dry, warm, ventilated air, the opposite of moisture.
- B, maceration: aseptic softening of a dead foetus in the uterus, not this waxy fat.
- D, skeletonisation: complete loss of soft tissue, not a fatty deposit.

Final Answer: Adipocere ⇒ **C**

Answer: (C) [Go Back to Q1](#)

Q2.**Solution**

Concept – conditions for mummification: Rapid drying preserves the body.

Step 1 – name the conditions: **Dry air, good ventilation and high ambient temperature** draw water out faster than putrefaction can proceed.

Step 2 – result: The body becomes dry, leathery and shrivelled, with features and injuries preserved.

Why the other options are wrong:

- A and D, cold or waterlogged: moisture favours putrefaction or adipocere, not mummification.
- C, sealed humid coffin: trapped moisture promotes decomposition.

Final Answer: Dry air, ventilation and warmth ⇒ **B**

Answer: (B) [Go Back to Q2](#)



Q3.

Solution

Concept – why preservation matters: Preserved tissue is evidence.

Step 1 – state the value: Both changes **preserve facial features and injuries**, so the body can still be identified and the time since death estimated.

Step 2 – practical use: Wounds fixed in adipocere or a mummified body can reveal the cause and manner of death long after death.

Why the other options are wrong:

- B, accelerate skeletonisation: both slow, not speed, tissue loss.
- C, prove drowning: neither change proves any single cause of death.
- D, within six hours: both take weeks to months to develop.

Final Answer: Preserve features and injuries $\Rightarrow$ A

Answer: (A) [Go Back to Q3](#)

Q4.

Solution

Concept – range of fire: The zones around an entry wound read off the distance.

Step 1 – interpret the zones: Blackening (soot), tattooing (powder stippling) and singeing of hair together place the muzzle within a **close (near) range**, roughly a few centimetres to about 60 cm.

Step 2 – the marked zone: X is the outer tattooing, formed by unburnt and partly burnt powder grains that cannot be wiped away.

Why the other options are wrong:

- A, distant: only a clean hole with an abrasion collar; no soot, tattooing or singeing.
- B, hard contact: a muzzle imprint and stellate, blackened wound, not a graded ring pattern.
- D, indeterminate: the zones here clearly allow the range to be judged.

Final Answer: Close (near) range $\Rightarrow$ C

Answer: (C) [Go Back to Q4](#)



Q5.

Solution

Concept – flame effects of a discharge: Only the muzzle flame burns tissue.

Step 1 – name the feature: Singeing of hair with a burnt, scorched margin appears only in contact or very close shots and fades as range grows.

Step 2 – reason: The hot flame reaches only a short distance beyond the muzzle; soot, then powder, then flame effects drop off in that order.

Why the other options are wrong:

- B, circular hole: present at most ranges.
- C, abrasion collar: formed by the bullet at essentially all ranges.
- D, inverted margins: a general feature of an entry wound, independent of range.

Final Answer: Singeing with a burnt zone ⇒ A

Answer: (A) [Go Back to Q5](#)

Q6.

Solution

Concept – petechiae in asphyxia: Named spots point to raised venous pressure.

Step 1 – name them: Pinpoint haemorrhages over the face, conjunctivae and behind the ears are **Tardieu spots**.

Step 2 – mechanism: Acute venous congestion ruptures small capillaries and venules, producing the petechiae.

Why the other options are wrong:

- A, lividity spots: gravity-dependent post-mortem staining, not pinpoint bleeds.
- C, lichenification: chronic skin thickening, unrelated.
- D, contusions: larger bruises from blunt trauma, not petechiae.

Final Answer: Tardieu spots ⇒ B

Answer: (B) [Go Back to Q6](#)



Q7.

Solution

Concept – general signs of asphyxia: A recognisable quartet appears at autopsy.

Step 1 – list them: Cyanosis, congestion, petechial haemorrhages and fluidity of the blood are the classic general signs.

Step 2 – why fluid blood: Oxygen lack and released fibrinolysins keep the blood dark and unclotted.

Why the other options are wrong:

- A, pallor and firm clots: the opposite of asphyxial congestion and fluid blood.
- B, rigor and cadaveric spasm: general death changes, not specific to asphyxia.
- C, dry, pale viscera: congestion, not pallor, is expected.

Final Answer: Cyanosis, congestion, petechiae, fluid blood ⇒ D

Answer: (D) [Go Back to Q7](#)

Q8.

Solution

Concept – who records a dying declaration: A magistrate is preferred, but urgency governs practice.

Step 1 – state the rule: Ideally a **magistrate** records it; in an emergency **any person, including the attending doctor**, may do so.

Step 2 – form: It should be in the declarant's own words and, where possible, witnessed.

Why the other options are wrong:

- B, only a police officer: police may record, but a magistrate is preferred and a doctor may in emergency.
- C, only a pathologist after death: a dying declaration is taken while the person is alive.
- D, never a doctor: a doctor is specifically allowed to record it in an emergency.

Final Answer: Magistrate, or any person in emergency ⇒ A

Answer: (A) [Go Back to Q8](#)



Q9.

Solution

Concept – evidentiary value: A dying declaration has special weight in law.

Step 1 – state the position: No oath is administered, and the declaration can be the sole basis for conviction if the court is satisfied it is true and voluntary.

Step 2 – basis: The law presumes a dying person will not lie (“a man will not meet his Maker with a lie in his mouth”).

Why the other options are wrong:

- A, requires an oath: no oath is taken, as the declarant cannot be cross-examined.
- C, needs two witnesses: corroboration is desirable but not mandatory.
- D, valid only if survives: it is used precisely when the declarant later dies.

Final Answer: No oath; can be sole basis for conviction ⇒ **B**

Answer: (B) [Go Back to Q9](#)

Q10.

Solution

Concept – the doctor’s certification: Only a fit mind gives a valid statement.

Step 1 – state the role: The doctor must **certify that the person is conscious and mentally fit (compos mentis)** to make the declaration.

Step 2 – purpose: This fitness certificate confirms the statement is reliable and admissible.

Why the other options are wrong:

- A, cross-examine: the doctor records, and does not interrogate, the declarant.
- B, delay for police: recording should not wait when death is imminent.
- C, administer an oath: no oath is required for a dying declaration.

Final Answer: Certify the person is compos mentis ⇒ **D**

Answer: (D) [Go Back to Q10](#)



Q11.

Solution

Concept – chronic mercury poisoning: Mercury has distinctive chronic pictures.

Step 1 – match acrodynia: Painful, pink, swollen and peeling extremities in children (pink disease, acrodynia) point to **mercury**.

Step 2 – related features: Chronic mercury also causes erethism (timidity, irritability) and intention tremors.

Why the other options are wrong:

- A, lead: causes a blue gum line, wrist drop and basophilic stippling, not acrodynia.
- B, arsenic: raindrop pigmentation and Mees' lines, not pink disease.
- D, copper: acute haemolysis and blue-green vomit, not acrodynia.

Final Answer: Mercury $\Rightarrow$

Answer: (C) [Go Back to Q11](#)

Q12.

Solution

Concept – antidote for mercury: Chelation removes the metal.

Step 1 – name the antidote: **BAL (dimercaprol)** is the specific chelating antidote for acute corrosive mercury poisoning.

Step 2 – action: Its thiol groups bind mercury to form an excretable complex.

Why the other options are wrong:

- A, atropine: antidote for organophosphate poisoning.
- C, naloxone: reverses opioid poisoning.
- D, sodium thiosulphate: used in cyanide poisoning, not mercury.

Final Answer: BAL (dimercaprol) $\Rightarrow$

Answer: (B) [Go Back to Q12](#)



Q13.

Solution

Concept – stimulant abuse pattern: Binge use plus local damage points to cocaine.

Step 1 – match the picture: Binges (“runs”), a subsequent “crash”, strong psychological dependence and a perforated nasal septum are typical of **cocaine**.

Step 2 – mechanism: Repeated snorting causes intense local vasoconstriction and ischaemic necrosis of the septal mucosa.

Why the other options are wrong:

- A, cannabis: causes relaxation and altered perception, not septal perforation.
- B, heroin: an opioid, causing sedation and miosis, not this pattern.
- D, barbiturates: sedatives producing CNS depression, not stimulant binges.

Final Answer: Cocaine ⇒

Answer: (C) [Go Back to Q13](#)

Q14.

Solution

Concept – active principle of cannabis: One compound drives the effects.

Step 1 – name it: The main psychoactive constituent of Cannabis is **tetrahydrocannabinol (THC)**.

Step 2 – preparations: Bhang (leaves), ganja (flowering tops) and charas (resin) differ mainly in THC content.

Why the other options are wrong:

- A, cocaine: the alkaloid of the coca plant, not cannabis.
- B, morphine: the opium alkaloid.
- C, ephedrine: a separate sympathomimetic, not from cannabis.

Final Answer: Tetrahydrocannabinol (THC) ⇒

Answer: (D) [Go Back to Q14](#)



Q15.

Solution

Concept – amphetamine effects: A sympathomimetic drives the body upward.

Step 1 – state the effects: Amphetamine causes **CNS stimulation with alertness, insomnia, hypertension and a risk of psychosis.**

Step 2 – mechanism: It releases and blocks reuptake of catecholamines, giving a sympathomimetic drive.

Why the other options are wrong:

- B, miosis with respiratory depression: an opioid picture, not amphetamine.
- C, bradycardia and hypothermia: opposite to the tachycardia and hyperthermia of amphetamine.
- D, salivation and lacrimation: a cholinergic (muscarinic) picture, not sympathomimetic.

Final Answer: Stimulation, insomnia, hypertension, psychosis ⇒ A

Answer: (A) [Go Back to Q15](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	C	2	B	3	A	4	C	5	A
6	B	7	D	8	A	9	B	10	D
11	C	12	B	13	C	14	D	15	A

