

ANATOMY

SYNOPSIS

RECENT PYQs NEET-PG

- Prepatellar bursa is also known as Housemaid's knee.
- Ossification of talus occurs at 7 months of intrauterine life.
- Extradural hemorrhage—middle meningeal artery rupture and pterion.
- Esophagus does not have serosa layer.
- Lingual nerve branch of mandibular division of trigeminal nerve provides somatic afferent innervation to the mucosa of the anterior 2/3rd of the tongue and floor of the mouth.
- Facial nerve is responsible for facial expression, parasympathetic innervation of the glands of the oral cavity and the lacrimal gland.
- Injury to accessory nerve causes difficulty in shrugging shoulders since it supplies sternocleidomastoid and trapezius muscles.
- Trendelenburg sign indicates weakness in the hip abductor muscles consisting of the gluteus medius and gluteus minimus.
- Cleft lip occurs due to failure of fusion of medial nasal and maxillary process.
- Suprasternal notch lies at T2–T3 level and sternal angle lies at T4–T5 level.

IMPORTANT RECENT POINTS (INCLUDES LATEST QS)

- Upper lateral cutaneous nerve is a branch of: **Axillary nerve**
- An injury to anatomical snuff box causes fracture of this bone: **Scaphoid**
- Muscle of arm causing flexion, adduction and medial rotation: **Pectoralis major**
- Testicular artery is a branch of: **Abdominal aorta**
- Inferior scapular angle lies at which level: **T8**
- Adduct is caused by adductor longus, brevis magnus gracilis and pectineus this muscle is adductor.
- Deep inguinal ring is formed in: **Transversalis fascia**
- Nerve damage that can cause hypothenar muscle wasting and loss of sensation of medial one and half digits: **Ulnar nerve**
- Failure of closure of the rostral neuropore at 25th day leads to: **Anencephaly**

- Parotid gland is supplied by this nerve: **Glossopharyngeal nerve**
- Killian's dehiscence is formed due to: **Inferior constrictor muscle**
- Muscle biceps brachii inserts into: **Radial tuberosity**
- Nerve supplying area between great toe and 2nd toe: **Deep Peroneal nerve**
- Dermatome supplying area of nipples: **T4**
- Dermatome supplying area of umbilicus: **T10**
- Retraction of scapula is done by: **Middle fibers of trapezius muscle**
- Nerve supplying cornea: **Trigeminal nerve**
- Longest extraocular muscle: **Superior oblique (7.7 cm)**
- Shortest extraocular muscle: **Medial rectus (5.5 cm)**

Neural tube defects

Anencephaly	Failure of closure of the rostral neuropore at 25 th day of intrauterine life. Open brain and lack skull vault
Iniiencephaly	Occipital skull and spine defects with extreme retroflexion of head.
Meningocele	Failure of closure of the caudal neuropore at 28 days. Saccular herniation of meninges and cerebrospinal fluid through a bony defect the spine.
Omphalocele	Herniation or protrusion of abdominal content into the base of umbilical cord covered by peritoneum without overlying skin.
Craniorachischisis	Anencephaly (absence of the brain and cranial vault, without skin covering) + contiguous bony defect of the spine (without meninges covering the neural tissue—rachischisis)
Encephalocele	Herniation of meninges (and brain)

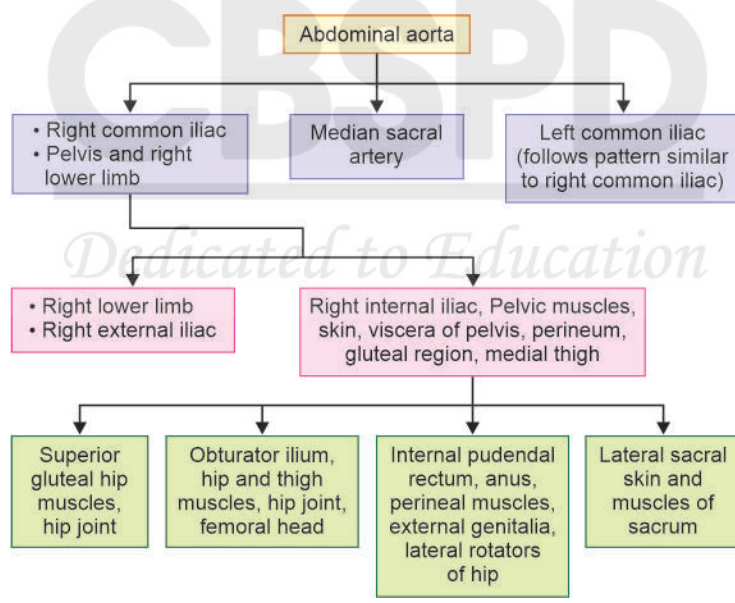
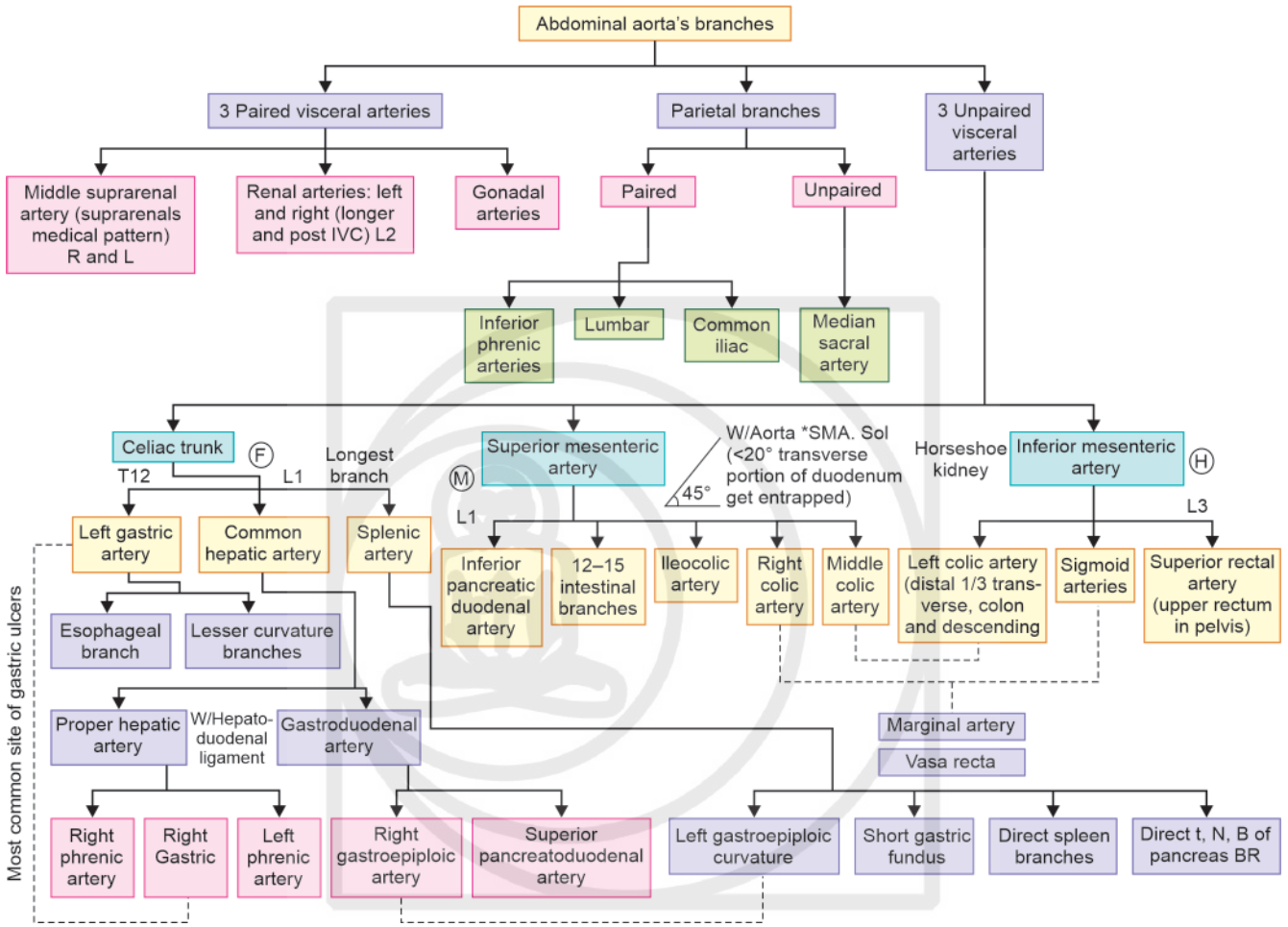
Placenta (fetomaternal organ)

Fetal part	Develops from chorionic sac (chorion frondosum)/trophoblast
Maternal part	Derived from endometrium (functional layer – Decidua basalis)

Contd...



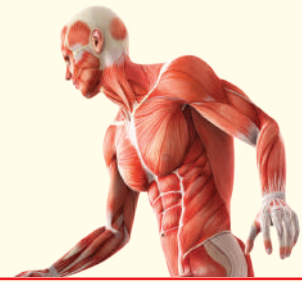
"Since there are multiple questions on aortic and iliac branches, here is the summarized flowchart for the ease of creating an image".



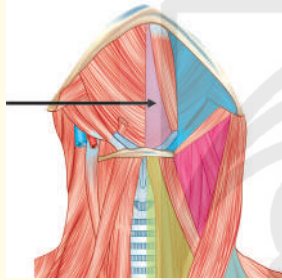
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MULTIPLE CHOICE QUESTIONS

(Most Recent Questions 2026)

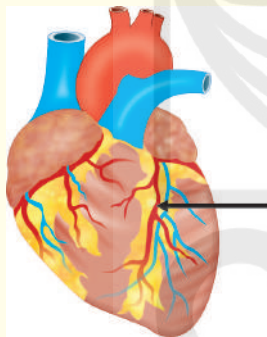


MR1. Identify the triangle shown in the image (marked with black arrow):
(Most Recent Question Jan 2026)



- a. Muscular triangle
- b. Submental triangle
- c. Carotid triangle
- d. Digastric triangle

MR2. Identify the marked blood vessel in the given image:
(Most Recent Question Jan 2026)



- a. Left coronary artery
- b. Right coronary artery
- c. Interventricular artery
- d. Left circumflex artery

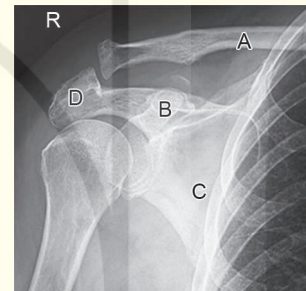
MR3. A person came in with difficulty to abduct his left arm above 15 degree and loss of sensation over his left lateral arm. X-ray of the affected arm is given. Which structure is most probably affected? (Most Recent Question Jan 2026)



- a. Axillary nerve
- b. Radial nerve
- c. Musculocutaneous nerve
- d. Subscapular nerve

MR4. Match the corresponding structures according to the labels in the given image:

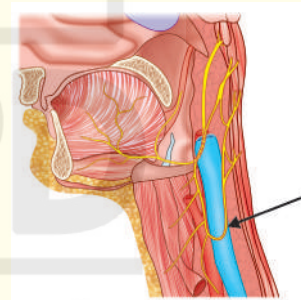
(Most Recent Question Jan 2026)



- a. A-Clavicle, B-Coracoid process, C-Acromion, D-Scapula
- b. A-Clavicle, B-Coracoid process, C-Scapula, D-Acromion
- c. A-Clavicle, B-Acromion, C-Coracoid process, D-Scapula
- d. A-Clavicle, B-Acromion, C-Scapula, D-Coracoid process

MR5. Which of the following muscle is not innervated by the nerve shown in the image?

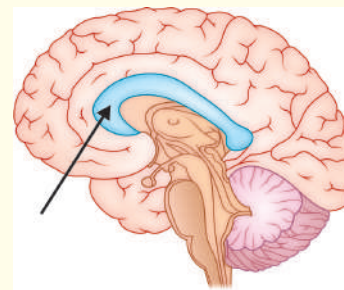
(Most Recent Question Jan 2026)



- a. Omohyoid
- b. Thyrohyoid
- c. Sternohyoid
- d. Sternothyroid

MR6. Identify the marked structure:

(Most Recent Question Jan 2026)



- a. Corpus callosum
- b. Septum pellucidum
- c. Globus pallidus
- d. Fornix

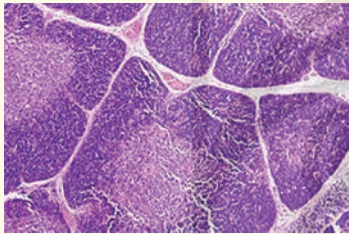
MULTIPLE CHOICE QUESTIONS

(Recent Questions 2025 - 2016)



EMBRYOLOGY, HISTOLOGY AND OSTEOLOGY

1. Identify the lymphatic structure from the histology section shown here? (Most Recent Question Jan 2025)



- a. Tonsil
b. Lymph node
c. Spleen
d. Thymus
2. Which of the following is a primary lymphoid organ? (Recent Pattern Question July 2024)
- a. Lymph node
b. Spleen
c. Thymus
d. Liver
3. Which vessel develops from the left 6th pharyngeal arch? (Recent Pattern Question July 2024, Aug 2020)
- a. Common carotid artery
b. Arch of aorta
c. Subclavian artery
d. Ductus arteriosus
4. Epithelial lining of trachea is: (Recent Pattern Question July 2024)
- a. Simple columnar epithelium
b. Ciliated columnar epithelium
c. Pseudostratified ciliated columnar epithelium
d. Nonciliated cuboidal epithelium
5. Which part of placenta is attached to maternal side? (Recent Pattern Question Jan 2024)
- a. Decidua parietalis
b. Decidua basalis
c. Decidua capsularis
d. Chorionic plate
6. At which time does the talus bone gets ossified in the intrauterine life? (Recent Pattern Question July 2023)
- a. 3 months
b. 6 months
c. 7 months
d. 9 months
7. A cyst is observed at the anterior border of the sternocleidomastoid in a 25-year-old man. This cyst is due to persistence of which of the following cleft? (Recent Pattern Question Jan 2023)
- a. 1st
b. 2nd
c. 3rd
d. 4th
8. Fallopian tube epithelium is: (Recent Pattern Question Dec 2021)
- a. Simple squamous
b. Ciliated cuboidal
c. Ciliated columnar
d. Pseudostratified columnar
9. Ductus arteriosus develops from which pharyngeal arch artery? (Recent Pattern Question Aug 2020)
- a. 3
b. 4
c. 5
d. 6

10. Structure developing in dorsal mesogastrium:

(Recent Pattern Question Aug 2020)

- a. Lesser omentum
b. Falciform ligament
c. Spleen
d. Liver
11. Skin receptor responsible for detecting rapid vibration sense: (Recent Pattern Question Aug 2020)
- a. Meissner corpuscle
b. Pacinian corpuscle
c. Merkel cell
d. Ruffini's corpuscle
12. Fetal midgut rotates in intrauterine life by: (Recent Pattern Question 2018-19)
- a. 270° clockwise
b. 360° clockwise
c. 270° anticlockwise
d. 360° anticlockwise
13. Rotation of mid gut loop occurs around: (Recent Pattern Question 2018-19)
- a. Superior mesenteric artery
b. Inferior mesenteric artery
c. Middle colic artery
d. Superior rectal artery
14. Neural crest cell migration is due to: (Recent Pattern Question 2018)
- a. Heparin
b. Heparan sulfate
c. Hyaluronic acid
d. Dermal sulfate
15. Which of the following is the derivative of ultimobranchial body? (Recent Pattern Question 2018)
- a. Thyroid
b. Parafollicular 'C' cells
c. Capsule of thyroid
d. 2nd branchial pouch
16. Which of the following is the most common congenital anomaly?
- a. Cleft lip
b. Cleft palate
c. Cleft lip and cleft palate both
d. None of the above
17. Type 1 collagen is present in:
- a. Hyaline cartilage
b. Elastic cartilage
c. Fibrocartilage
d. All of these
18. Which of the following is the derivative of tumor from Rathke's pouch? (Recent Pattern Question 2018)
- a. Meningioma
b. Craniopharyngioma
c. Ependymoma
d. Low grade glioma
19. Hardest bone of the body is: (Recent Pattern Question 2017)
- a. Head of humerus
b. Calcaneum
c. Tibial condyle
d. Osseous labyrinth
20. Which of the following structure is derived from umbilical artery? (Recent Pattern Question 2017)
- a. Ligamentum arteriosum
b. Medial umbilical ligament
c. Ligamentum venosum
d. Ligamentum teres
21. Labia majora is homologous to _____ in a male. (Recent Pattern Question 2017)
- a. Glans penis
b. Scrotum
c. Corpus cavernosa
d. Shaft of penis
22. How many cells are there in morula cell stage? (Recent Pattern Question 2017)
- a. 8
b. 16
c. 32
d. >64

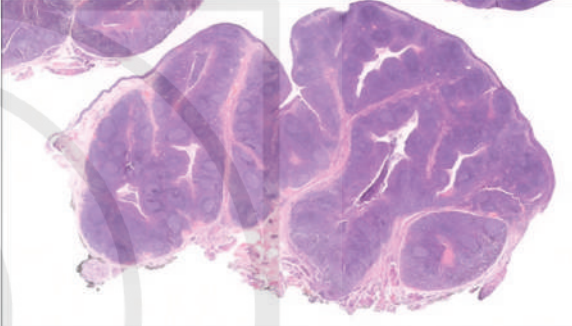
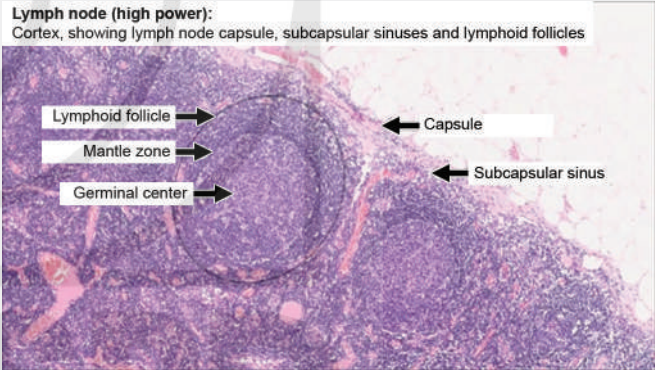
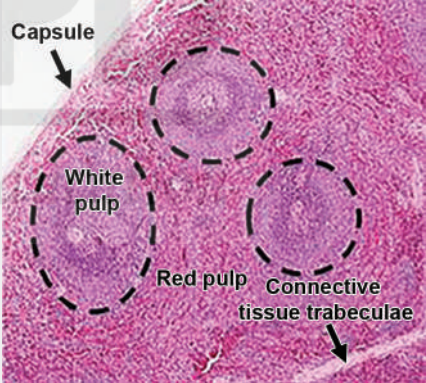
ANSWERS WITH EXPLANATIONS

EMBRYOLOGY, HISTOLOGY AND OSTEOLOGY

1. Ans. (d) Thymus

Ref: Gray's Anatomy: The Anatomical Basis of Clinical Practice 41st ed. pg. 74

The image shows the histology section of a lymphoid organ with distinct lobules, containing a darkly stained outer cortex and a lighter-stained central medulla. Along with clear lobular septation by connective tissue and the presence of Hassall's corpuscles which are pale, eosinophilic concentric structures in the medulla which are hallmark of thymus.

<p>Tonsil</p> <ul style="list-style-type: none"> • Lymphoid follicles with germinal centers • Crypts lined by stratified squamous epithelium 	
<p>Lymph node</p> <ul style="list-style-type: none"> • Has a capsule, cortex (with follicles), paracortex, and medulla • Subcapsular and medullary sinuses present • Not lobulated like thymus • No Hassall's corpuscles 	<p>Lymph node (high power): Cortex, showing lymph node capsule, subcapsular sinuses and lymphoid follicles</p> 
<p>Spleen</p> <ul style="list-style-type: none"> • The spleen shows red pulp and white pulp • Central arteries are seen in the white pulp • No cortex/medulla or lobular structure • No Hassall's corpuscles 	

Extra Mile

The thymus is a primary lymphoid organ involved in T-cell maturation

2. Ans. (c) Thymus

Ref: BD Chaurasia, 6th ed. Vol. II, pg. 147

- Thymus and bone marrow are primary lymphoid organs.
- Lymph node and spleen are secondary lymphoid organs.

? Image-Based Questions

1. A man fell on his shoulder with his head pushed in the opposite direction. He presented with the following deformity. Which nerve root values are most likely affected? (Most Recent Question July 2025)



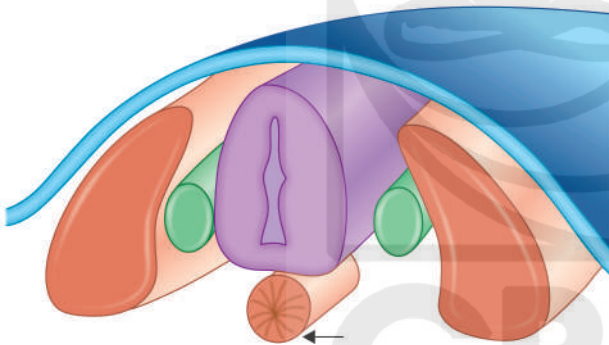
- a. C5 and C6
- b. C6 and C7
- c. C6 and C7
- d. C8 and T1

4. Injury to which of the following areas will limit dorsiflexion of foot? (Most Recent Question July 2025)



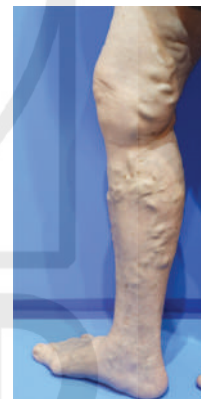
- a. A
- b. B
- c. C
- d. D

2. Which structure is formed by the structure indicated by the arrow? (Most Recent Question July 2025)



- a. Annulus
- b. Nucleus pulposus
- c. Neural tube
- d. Septum Transverse

5. In the given image which vein is mainly affected? (Most Recent Question July 2025)



- a. Great saphenous vein
- b. Short saphenous vein
- c. Femoral vein
- d. Perforator veins

3. In the given X-ray of foot, the structure indicated is identified as: (Most Recent Question July 2025)



- a. Intermediate cuneiform
- b. Lateral cuneiform
- c. Cuboid
- d. Navicular

6. A patient presents with the following eye appearance since birth. The diagnosis is: (Most Recent Question July 2025)



- a. Congenital ptosis
- b. 3rd nerve palsy
- c. Mechanical ptosis
- d. Aponeurotic ptosis

FORENSIC MEDICINE

SYNOPSIS

RECENT PYQs NEET-PG

- Immediate 1st step of management after snake bite (Pain, swelling and bleeding) – Use sling or splint (pressure immobilization of the area)
- Blood during autopsy is preserved in – NaF
- During measurement of barrel of a rifled firearm weapon, caliber depends on – Distance between 2 opposite lands
- Most appropriate procedure for preserving handkerchiefs found at crime scene – Preserve in envelope/paper bag
- LSD poisoning – Tachycardia and red colored halo
- Ketamine poisoning – Increased secretion with diarrhea
- CO poisoning – Cherry red color postmortem staining
- To assess the level of lead in body, sample is taken from – Blood
- Death sentence for rape can be given by – Assistant session judge
- Organ evaluated for presence of tattoo – Lymph node
- 10-year-old child has 20 permanent and 4 temporary teeth
- Comparison of photo and skull found – Superimposition
- Contact shot – Stellate wound with everted margins along with deposition of gun powder inside with smudging of hair with the presence of muzzle imprint.
- Measuring the postmortem caloricity – Sigmoid graph
- Arching of back with episodes of seizures – Strychnine
- BNS 90 deals with – Death of the mother by act done with intent to cause miscarriage
- Temperature of dead body is 39°C because of Septicemia
- MC organ involved in seat belt injury: Hollow viscus
- MC organ injured in air blast shock wave: Lungs
- In blast injury, first injured organ is: Tympanic membrane > Lung
- MC organ damaged in under water blast: GI tract

IMPORTANT RECENT POINTS (INCLUDES LATEST Qs)

Blood stain specific test: **Hemin test**

Plaintiff is: A person who files case in civil court

Grounds for MTP (Act 1971):

- **Therapeutic:** Risk to pregnant women
- **Eugenic:** Risk for child to be born
- **Humanitarian:** Pregnancy caused by rape
- **Socioeconomic:** Pregnancy due to contraceptive failure

Most common type of fingerprint: **Loops**

Postponement of hanging of pregnant lady is defined by which CrPC? **Section 416**

BNS 64 (1) deals with: **Punishment for rape**

Declaration of Geneva is related with: **Hippocratic oath**

Declaration of Helsinki: Ethical principles for medical research involving human subjects

Declaration of Tokyo: International guidelines for physicians concerning torture and other cruel, inhuman or degrading treatment or punishment in relation to detention and imprisonment

Declaration of Lisbon: **Deals with the rights of the patient**

Declaration of Malta: **Hunger strikers**

Blanket consent is taken: **While admission to do any surgery**

Best bone specimen for sex differentiation: **Pelvis**

Davidson bodies is used to determine: **Sex**

Pearson formula is used for: **Stature**

Rugoscopy is study of: **Palate prints**

Locard system is: **Poroscopy**

Galton's system is used for: **Dactylography**

Instantaneous rigor is seen in: **Cadaveric spasm**

Time of floating of dead body in drowning in summer: **24 hours**

For toxicology sampling, best site for blood collection: **Femoral vein**

Harakiri is suicide by stabbing in: **Abdomen**

Contd...



MULTIPLE CHOICE QUESTIONS

(Most Recent Questions 2026)

MR1. Which paraphilia involves sexual gratification from wearing clothes of the opposite gender?

(Most Recent Question Jan 2026)

- a. Eonism
- b. Fetishism
- c. Exhibitionism
- d. Voyeurism

MR2. Identify the given fingerprint pattern:

(Most Recent Question Jan 2026)



- a. Loop
- b. Whorl
- c. Arch
- d. Composites

MR3. A male is brought for medico-legal examination after sustaining a firearm injury. On inspection of the wound, there is tattooing (powder stippling) of the surrounding skin, but no burning, singeing of hair, or charring is noted. The wound margins are inverted, suggesting an entry wound. What is the most likely range of fire?

(Most Recent Question Jan 2026)

- a. Close range
- b. Contact range
- c. Intermediate range
- d. Distant range

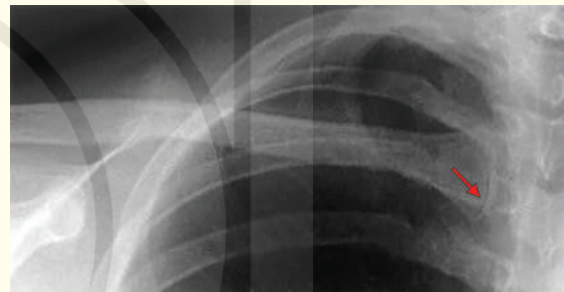
MR4. A 29-year-old man presents for medico-legal examination within 24 hours after alleging sodomy by a coworker. Which specimen should be primarily collected of the assailant?

(Most Recent Question Jan 2026)

- a. Oral cavity for semen
- b. Anal swab for cell and semen
- c. Nail
- d. Clothing samples

MR5. A young male is brought for a medico-legal examination under court orders to determine his age for criminal liability. Based on the given radiographic findings, what is the most likely age of the accused?

(Most Recent Question Jan 2026)



- a. 12–14 years
- b. 14–16 years
- c. 16–18 years
- d. 18+ years

MR6. A person died in a building collapse, and the body was later recovered in a burnt condition. To identify fractures and internal injuries without disturbing the remains, which of the following methods would be most useful?

(Most Recent Question Jan 2026)

- a. Virtual autopsy
- b. Photography
- c. Polygraphy
- d. DNA analysis

MR7. A married man reports that he is unable to achieve an erection during intercourse with his wife, but he is able to perform normally with other women. What is the most appropriate term used to describe this condition?

(Most Recent Question Jan 2026)

- a. Impotence coeundi
- b. Impotence generandi
- c. Impotence quoad hoc
- d. Pseudo-impotence

ANSWERS WITH EXPLANATIONS

MR1. Ans. (a) **Eonism**

Ref: Reddy KSN – *The Essentials of Forensic Medicine and Toxicology*, 35th ed. pg. 512–514

- **Eonism** is a type in which an individual derives sexual gratification from wearing clothes of the opposite gender.
- The term was introduced by Havelock Ellis and is also known as transvestic fetishism.
- Key characteristics:
 - A person experiences sexual arousal while dressing in opposite-sex clothing.
 - The individual usually retains their own gender identity.

Extra Mile

Paraphilia	Description
Eonism (Transvestism)	Sexual arousal from wearing opposite-sex clothes
Fetishism	Sexual arousal from inanimate objects (e.g., shoes, underwear)
Exhibitionism	Sexual gratification from exposing genitals
Voyeurism	Sexual pleasure from secretly observing others

MR2. Ans. a) **Loop**

Ref: Reddy KSN – *Essentials of Forensic Medicine*, 35th ed. pg. 72–74

- The shown image of the fingerprint is a loop pattern. It is the most common fingerprint type, seen in approximately 60–70% of individuals.
- **Fingerprints** are unique epidermal ridge patterns used in personal identification in forensic science.
- Key features of loop pattern:
 - Ridges enter from one side, curve around, and exit the same side

Extra Mile

Fingerprint pattern	Characteristic feature
Loop	Ridges enter and exit same side; one delta
Whorl	Circular or spiral ridges; two deltas
Arch	Ridges run from one side to the other without looping
Composite	Combination of two patterns

MR3. Ans. (c) **Intermediate range**

Ref: Reddy KSN – *Essentials of Forensic Medicine*, 35th ed. pg. 300–305

Tattooing (powder stippling) occurs when unburnt or partially burnt gunpowder particles strike the skin, which is characteristic of intermediate range firing.

Extra Mile

- **Contact range:** Burning, charring, and blackening present
- **Intermediate range:** Tattooing without burning or singeing
- **Distant range:** No tattooing or burning, only bullet hole present

MR4. Ans. (b) **Anal swab for cell and semen**

Ref: Reddy KSN – *Essentials of Forensic Medicine*, 35th ed. pg. 350–55

- In cases of **alleged sodomy (anal intercourse)**, medico-legal examination aims to detect **evidence of semen and spermatozoa**.
- Within **24 hours**, the most important specimen is:
 - **Anal swab**
 - Collected from anal canal and perianal region.
- Laboratory examination may reveal:
 - **Spermatozoa**
 - **Prostatic acid phosphatase**
 - **DNA evidence**
- Other samples like clothing and nail scrapings may also be collected, but the **anal swab is the primary specimen**.

MR5. Ans. (d) **18+ years**

Ref: Reddy KSN – *Essentials of Forensic Medicine*, 35th ed. pg. 110–115

- The medial epiphysis of the clavicle is the last epiphysis in the body to fuse.
- Complete fusion usually occurs around 21–22 years, and its presence indicates that the individual is at least above 18 years of age.
- Therefore, radiological fusion of the clavicular epiphysis strongly suggests majority age (>18 years) in medico-legal evaluation.

Extra Mile

Most epiphyseal unions occur around 18 years → key forensic age marker.

MR6. Ans. (a) **Virtual autopsy**

Ref: Reddy KSN – *Essentials of Forensic Medicine and Toxicology*, 35th ed. pg. 60–62

- **Virtual autopsy (Virtopsy)** uses advanced imaging techniques such as CT scan and MRI to examine the body non-invasively.
- It is particularly useful in charred or decomposed bodies to detect fractures, foreign bodies, and internal injuries when conventional autopsy may be difficult.

Extra Mile

Method	Main use in forensic investigation
Virtual autopsy	Detection of fractures, internal injuries, foreign bodies using CT/MRI
Photography	Documentation of external injuries
Polygraphy	Lie detection test in suspects
DNA analysis	Identification of unknown individuals

MULTIPLE CHOICE QUESTIONS

(Recent Questions 2025 - 2016)



AUTOPSY AND IDENTIFICATION

- The body brought for autopsy was cold and had developed rigor mortis in all 4 limbs with livor mortis at back/fixed but no sign of putrefaction. What will be the estimated time since death?** (Most Recent Question Jan 2025)
 - 12–24 hours
 - 6–12 hours
 - 24–48 hours
 - 36–48 hours
- During forensic examination, a skull bone was brought by police whose cephalic index came out to be 85. Skull bone belongs to which race?** (Most Recent Question Jan 2025)
 - Negroes
 - Aryan
 - European
 - Mongoloids
- During an autopsy, blood samples are preserved using which of the following substances?** (Recent Pattern Question Jan 2024)
 - Sodium fluoride (NaF)
 - Sodium chloride (NaCl)
 - Formalin
 - Rectified spirit
- During the forensic examination of semen from a rape victim, the presence of distinctive yellow needle-like crystals is noted. Which test has been used here?** (Recent Pattern Question Jan 2024)
 - Barberio's test
 - Acid phosphatase test
 - Papanicolaou smear
 - Florence test
- During a police investigation, bones are uncovered at a crime scene. What key characteristic is crucial in differentiating between human and canine bones for forensic analysis?** (Recent Pattern Question Jan 2024)
 - Precipitin test
 - Acid phosphatase
 - LDH
 - All of these
- Two handkerchiefs with bloodstains are found at a crime scene. What is the most appropriate procedure for handling and preserving these items?** (Most Recent Question Jan 2024)
 - Place them in the same plastic bag and seal it for preservation
 - Rinse the bloodstains with water to prevent contamination
 - Preserve them in two separate envelope or paper bag
 - Dry them with a spirit lamp
- A 10-year-old boy will have _____ permanent and _____ temporary teeth.** (Recent Pattern Question July 2023)
 - 20, 4
 - 16, 8
 - 12, 8
 - 12, 12
- A patient died, and the relatives said that he had a tattoo, but it was not visible during autopsy. What is the best location to check for evidence of a tattoo?** (Recent Pattern Question July 2023)
 - Spleen
 - Artery
 - Lymph node
 - Liver
- The police recovered a beheaded skull. The relatives of a missing person give the photographs of the same to police. These two samples can be analyzed with which technique?** (Recent Pattern Question July 2023)
 - Fingerprint
 - DNA fingerprint
 - Superimposition
 - Cheiloscopy
- Which of the following is not a blood stain analysis test?** (Recent Pattern Question Jan 2023)
 - Barberio's test
 - Teichmann's test
 - Takayama (Hemochromogen) test
 - Spectroscopy
- Florence test is used for:**
 - Blood
 - Semen
 - Urine
 - Albumin
- The seminal stains show fluorescence when examined under the filtered ultraviolet light, this property of seminal stains is due to the presence of:**
 - Choline
 - Spermine
 - Sperm
 - Enzymes
- Identification of semen is done by:**
 - Hemochromogen test
 - Barberio's test
 - Guaiacum test
 - Leuco malachite green test
- Saliva is tested by:**
 - Amylase
 - Orthotoluidine
 - Acid phosphatase
 - Tetramethylbenzidine
- Cherry red color postmortem staining is associated with which poisoning event?** (Recent Pattern Question Jan 2023, June/Dec 2021)
 - H₂S
 - Nitrate
 - Carbon monoxide
 - Hydrogen cyanide
- A person died due to starvation. Which is correct in such case during autopsy?** (Recent Pattern Question June/Dec 2021)
 - Enlarged heart
 - Enlarged stomach
 - Distended gallbladder
 - Expanded lungs
- In Barberio's test, yellow-color needle-shaped crystals are seen under microscope. This is done to detect which stain?** (Recent Pattern Question June/Dec 2021)
 - Sputum
 - Semen
 - Blood
 - CSF
- A case of road traffic accident was brought for autopsy. Findings were, stiff neck, stiff upper and lower limbs. Primary relaxation was absent. This is suggestive of:** (Recent Pattern Question Dec 2019-20)
 - Rigor mortis
 - Cadaveric spasm
 - Heat stiffness
 - Cold stiffness
- A dead fetus was found in a water canal. The crown-heel length was 25 cm. Distinct fingernails were visible with minimal hair growth. Approximate age of fetus is:** (Recent Pattern Question Dec 2019-20)
 - 3 months
 - 5 months
 - 7 months
 - 9 months
- Gender assessment in a 12-year-old child is best done by:** (Recent Pattern Question Dec 2019-20)
 - Skull
 - Femur
 - Hip bone
 - Mandible

46. In a court of law, the examination of a witness is conducted to develop new or old facts and to try to weaken the evidence by showing that it is biased, inaccurate, and inconsistent. This is done by a lawyer during which of the following?
(Recent Pattern Question June 2022)
- Direct examination
 - Cross-examination
 - Redirect examination
 - Courtroom examination
47. A patient died because of a doctor's negligence, but some other factors also were the reason of his death. This type of malpractice is known as:
(Recent Pattern Question June 2022)
- Contributory negligence
 - Res ipsa loquitur
 - Volenti non fit injuria
 - Respondeat superior/Novus actus interveniens
48. A physician referred a patient to a radiologist. Later, a person known to the radiologist visited the physician with a thank-you letter and a money packet. Which is true regarding the above situation.
(Recent Pattern Question June/Dec 2021)
- Doctor should be punished under IPC law
 - Medical dichotomy
 - Association of a Physician
 - Covering
49. Judicial hanging is a method of execution of a condemned criminal. The cause of death in such cases is mostly due to:
(Recent Pattern Question June/Dec 2021)
- Vagal inhibition
 - Cervical vertebral fracture
 - Asphyxia
 - Cerebral hypoxia
50. A person has committed a criminal offence, was caught by police, and later brought to a criminal court, but the court directs the police to transfer the case to juvenile court if it is proved that the accused is of _____ years of age:
(Recent Pattern Question June/Dec 2021)
- 21
 - 17
 - 25
 - 19
51. A 17-year-old girl was kidnapped. Police caught the accused and brought him to the police station. After sometime, the accused was found dead. Inquest in this case will be done by:
(Recent Pattern Question Aug 2020)
- Coroner
 - Judicial Magistrate
 - Police
 - Medical Examiner
52. Under what circumstances does a dying declaration (DD) given by a person of sound mind become invalid?
(Recent Pattern Question Aug 2020)
- If the victim survives after recording DD
 - DD was half recorded
 - DD not signed by the dying person
 - If DD is recorded by a doctor
53. Grounds of divorce include all; except:
(Recent Pattern Question 2019)
- Impotency
 - Frigidity
 - Mental retardation
 - Poverty
54. Before dying declaration, the role of a doctor is:
- To assess *compos mentis* (Recent Pattern Question 2019)
 - To record the statement in the presence of a magistrate
 - To cross-examine the person
 - To put the person under oath before declaration
55. Which of the following is related to the legal responsibility of an insane person? (Recent Pattern Question 2018-19)
- Hasse's rule
 - Currens rule
 - Morrison rule
 - Rule of nine
56. True about a summon to a medical examiner for a criminal case:
(Recent Pattern Question 2018-19)
- Under penalty document
 - Issued by magistrate
 - Conduct money paid along with summon
 - Punishable under IPC Sec 87
57. First class magistrate is selected by the:
(Recent Pattern Question 2017)
- State government
 - Chief justice of the Supreme Court
 - Chief justice of the High Court
 - Governor
58. Which of the following is an example of a leading question?
(Recent Pattern Question 2016)
- How did you get cuts on your T-shirt?
 - Cause of injury
 - Whether it is caused by knife
 - Size of incised wound
59. Which of the following is not illegal in India?
- Bestiality
 - Masturbation
 - Buccal coitus
 - Indecent assault

FORENSIC MEDICINE UPDATE

60. Indian Penal Code is replaced by:
- Bhartiya Penal Code
 - Bhartiya Nyaya Sanhita
 - Bhartiya Suraksha Sanhita
 - Bhartiya Nagarik Suraksha Sanhita
61. McNaughten's rule comes under this BNS section in India:
- BNS 20
 - BNS 22
 - BNS 23
 - BNS 24
62. Which of the following BNS section describes medical negligence?
- BNS 101
 - BNS 103
 - BNS 104
 - BNS 106
63. A female, after 4 years of marriage died, and a note was found from her, mentioning that she was tortured for dowry by her husband's relatives. This will be punished under which BNS section?
- BNS 304 B
 - BNS 74
 - BNS 75
 - BNS 80
64. BNS 114:
- Grievous hurt
 - Hurt
 - Punishment of hurt
 - Voluntarily causing hurt
65. Grievous hurt is defined under BNS:
- 114
 - 116
 - 115
 - 117
66. Criteria for grievous hurt include all; except:
- Endangerment of life
 - Privation of an eye or sight
 - Permanent disfiguration of the face
 - Admission of the injured person to a hospital for 21 days
67. Grievous hurt is said to exist if a person is in severe bodily pain or unable to follow ordinary pursuits for a minimum of how many days or weeks?
- 15 days
 - 18 days
 - 20 days
 - 25 days
68. Rape comes under BNS section:
- 63
 - 65
 - 67
 - 69

ANSWERS WITH EXPLANATIONS

AUTOPSY AND IDENTIFICATION

1. Ans. (b) 6–12 hours

Ref: *The Essentials of Forensic Medicine and Toxicology*, 33rd ed. pg. 160

- Rigor mortis fully develops in 6–12 hours.
- Livor mortis is fixed in 6–12 hours.
- Putrefaction starts after 24–28 hours.

Postmortem changes	Onset after death	Fully developed	Fades/disappears
Algor Mortis (cooling)	Starts within 30 minutes–1 hours	Body cold in 8–12 hours	N/A
Rigor Mortis	Begins in 1–2 hours	Full in 6–12 hours	Disappears by 24–36 hours
Livor Mortis	Starts in 30 minutes–2 hours	Fixed in 6–12 hours	Begins to fade after 24 hours
Putrefaction	Starts ~24–48 hours	Greenish discoloration	Progresses rapidly after 48 hours

2. Ans. (d) Mongoloids

Ref: *The Essentials of Forensic Medicine and Toxicology*, 33rd ed. pg. 100

In mongoloids, skull shape is brachycephalic and cephalic index is >80. It includes Chinese, Japanese, Tibetans.

Cephalic Index (CI)	Skull shapes	Categories	Typical racial groups	Examples
<75	Dolichocephalic	Long-headed	Aryans, Europeans (Caucasoids)	Germans, Indians (north)
75–80	Mesocephalic	Medium-headed	Europeans, Mediterranean	Spanish, French
>80	Brachycephalic	Short-headed	Mongoloids	Chinese, Japanese, Tibetans

3. Ans. (a) Sodium fluoride (NaF)

The Essentials of Forensic Medicine and Toxicology Kindle, 34th ed. pg. 643

- During an autopsy, blood samples are typically preserved using sodium fluoride (NaF). Sodium fluoride acts as an anticoagulant, and preservative preventing the blood from clotting and allowing for better analysis of the sample.
- **Sodium chloride (NaCl)** is a common saline solution used for other medical purposes but does not preserve blood samples.
- **Formalin** is used for tissue preservation, not for blood.
- **Rectified spirit** is used for disinfection and is not suitable for preserving blood samples

4. Ans. (a) Barberio's test

The Essentials of Forensic Medicine and Toxicology Kindle, 34th ed. pg. 376

- **Barberio's Test** is described as a saturated aqueous or alcoholic solution of picric acid when added to spermatic fluid produces yellow needle-shaped rhombic crystals of spermine picrate. The reaction depends on the presence of prostatic secretion.
- **Florence Test** is described as the stain is extracted by 10% hydrochloric acid, and a drop is placed on a glass slide and allowed to dry. A coverslip is placed over this, and a drop of Florence solution (potassium iodide, iodine, and water) is allowed to run under the coverslip.
- **If semen is present**, dark-brown crystals of choline iodide appear immediately. They are rhombic or needle-shaped

crystals resembling hemin but are larger, arranged in clusters, rosettes, crosses, etc.

- Choline originates from the seminal vesicles. The test is not proof of seminal fluid, but only of presence of some vegetable or animal substance. A negative reaction is proof that the stain is not seminal.
- **Acid Phosphatase test** is a presumptive test for semen acid phosphatase is an enzyme found in high concentration in semen. The enzyme acid phosphatase hydrolyses the substrate to the corresponding phenol and phosphate ion. The phenol formed is simultaneously coupled with a suitable diazonium salt as a chromogen to give a characteristic-colored dye stuff, which is a positive test for the presence of a seminal stain.
- A **Papanicolaou smear**, commonly known as a Pap smear or Pap test, is a procedure used to collect cells from the cervix to detect cervical cancer or precancerous conditions. The test can also identify infections and abnormalities in cervical cells.

5. Ans. (a) Precipitin test

The Essentials of Forensic Medicine and Toxicology Kindle, 34th ed. pg. 533

- To differentiate between human and canine bones, the most crucial characteristic is the **precipitin test**. This test is used to identify the species origin of the bones by detecting specific proteins unique to different animal species. It helps determine whether the bones are human or from another species, such as canine.

? Image-Based Questions

1. A 40-year-old male was brought dead after a road traffic accident. On autopsy, the following injury was noted on the face as shown in the image. What type of injury is shown in the given image?

(Most Recent Question July 2025)



- a. Avulsion
b. Laceration
c. Incised wound
d. Contusion

4. Identify the finding in antemortem drowning shown in the image.

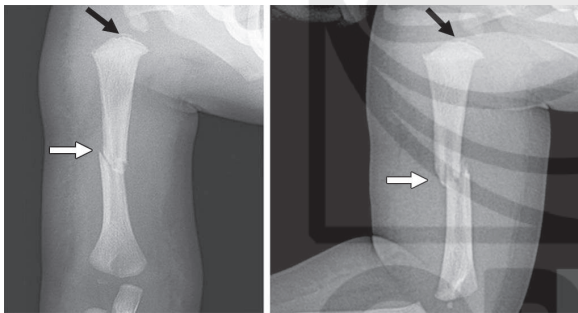
(Most Recent Question July 2024)



- a. Cadaveric spasm
b. Pugilistic attitude
c. Washerwoman's hand
d. Emphysema aquosum

2. A 6-month child is brought with multiple fractures and parents report a single fall. Which of the following is most likely seen?

(Most Recent Question July 2025)



- a. Battered baby syndrome
b. Accidental fall
c. Osteogenesis imperfecta
d. Blunt object injury

5. Identify the plant.

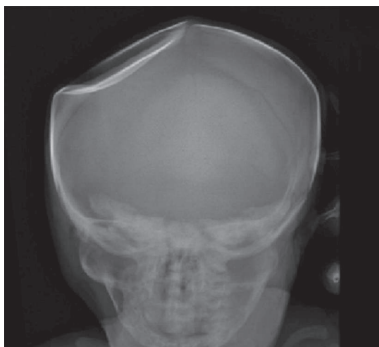
(Recent Pattern Question July 2023)



- a. Nerium odorum
b. Cascabela thevetia
c. Aconite
d. Cerbera odollam

3. Two friends were working together at a construction site. A hammer fell from one friend's hand onto another friend's head. The X-ray revealed the fracture. This is what type of fracture?

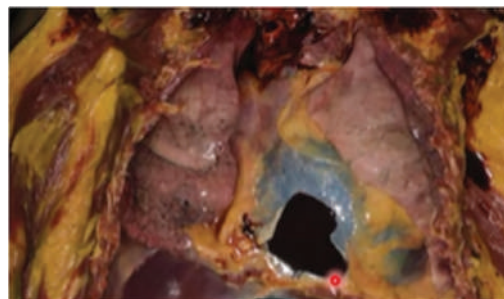
(Most Recent Question Jan 2025)



- a. Linear
b. Depressed
c. Hinge
d. Ring

6. During autopsy the following finding is noted. This finding is clinically suggestive of:

(Recent Pattern Question June/Dec 2021)



- a. Congenital pulmonary hypoplasia
b. Cardiac tamponade
c. Pulmonary embolism
d. Pulmonary artery aneurysm

EXPLANATIONS OF IMAGE-BASED QUESTIONS

1. Ans. (a) **Avulsion**

Ref: Reddy KSN. *The Essentials of Forensic Medicine and Toxicology*, Jaypee Brothers; 34th ed. pg. 190–192

- **Avulsion wound** (degloving injury) occurs when tissue is forcibly torn away from its normal anatomical position, usually due to **high-velocity trauma** (e.g., road traffic accidents, machinery injuries).
- In the given autopsy image, the **facial skin and soft tissue are peeled away from the underlying structures**, exposing deeper layers — characteristic of **avulsion**.

Other Options:

- **b. Laceration:** It is an irregular tear of the skin caused by blunt force, but it does not show complete separation or “flap-like” detachment.
- **c. Incised wound:** It is produced by sharp force and has clean-cut margins which is not seen here
- **d. Contusion:** It is a bruise caused by blunt force, presenting as discoloration due to subcutaneous hemorrhage, not tissue separation.

2. Ans. (a) **Battered baby syndrome**

Ref: Reddy KSN. *The Essentials of Forensic Medicine and Toxicology*, Jaypee Brothers; 34th ed. pg. 388–389

- **Battered baby syndrome (child abuse syndrome)** is strongly suspected when a child presents with **multiple fractures inconsistent with the history** (e.g., a single fall cannot produce multiple fractures).
- Common features:
 - Injuries of **different ages/stages of healing**
 - Fractures at unusual sites (ribs, metaphysis of long bones)
 - Associated subdural hematomas, retinal hemorrhage, bruises, burns, or internal organ injury
- Seen in children <3 years, most commonly **infants under 1 year**.

Other Options:

- **b. Accidental fall:** A single accidental fall typically causes only one fracture.
- **c. Osteogenesis imperfecta:** It can mimic abuse due to bone fragility, but usually shows history of recurrent fractures, blue sclera, hearing loss, or family history.

- **d. Blunt object injury:** It causes localized injury, not generalized multiple fractures.

3. Ans. (b) **Depressed**

Ref: *The Essentials of Forensic Medicine and Toxicology*, 33rd ed. pg. 283

In a depressed bone fracture, the bone fragment is pushed inward and can compress brain. It occurs by high velocity, low area impaction for example hammer blow.

Fracture type	Description	Mechanism of injury
Linear	A simple crack in the skull without displacement	Low-velocity, broad area impact
Depressed	Bone fragments are pushed inward, may compress brain	High-velocity, small area (e.g., hammer blow)
Hinge	Transverse fracture at the base of skull forming a “hinge”	Severe blunt trauma (e.g., fall, MVA)
Ring	Circular fracture around foramen magnum	Fall from height onto feet or buttocks

4. Ans. (a) **Cadaveric spasm**

Ref: *The Essentials of Forensic Medicine and Toxicology* Kindle, 34th ed. pg. 611

- **Cadaveric spasm** can be a finding in drowning cases, especially when the victim is found clutching objects such as grass, weeds, showing a sign of struggle before death. This can help differentiate antemortem drowning from postmortem submersion.
- **Pugilistic attitude** is seen in burn/electrocution cases. It is seen due to heat related muscle contractures.
- **Washerwoman** is wrinkling of skin, 4–8 hours after drowning. It is seen in postmortem drowning.
- **Emphysema aquosum** is hyperexpanded and water-logged lungs. Seen in cases of drowning.

5. Ans. (b) **Cascabela thevetia**

Ref: VV Pillay. *Textbook of Forensic Medicine and Toxicology*, 18th ed. pg. 578

- **Cascabela thevetia**/Yellow oleander is a poisonous plant native throughout Mexico and in Central America, and cultivated widely as an ornamental. It is a relative of Nerium oleander, giving it a common name yellow oleander.
- It contains cardiac glycosides. Antidotes for treatment include atropine and digoxin immune Fab (antibodies) and treatment may include oral administration of activated charcoal.

Extra Mile



Nerium odorum



Aconite



Cerbera odollam



10

SURGERY

SYNOPSIS

- Typical duration within which jaundice is observed in infants in context of biliary atresia – 2 weeks
- Most common complication of ERCP – Acute pancreatitis
- Lateral boundary of Hesselbach's triangle – Inferior epigastric vessels
- Management of gastroschisis in neonate – Immediate surgical wall closure and repair
- INR value for elective inguinal hernia surgery: 1–1.5
- Cholecystectomy and subsequent pain in the legs. IOC – Duplex scan
- “Sure sign” of abdominal dehiscence in a postoperative patient – Serosanguinous drainage from the wound
- Squamous cell carcinoma (SCC) with negative lymph nodes. TOC – Wide local excision with radiation
- NOT preserved in modified radical neck dissection (MRND) – Submandibular gland
- Maximum chances of graft versus host rejection - Intestine
- Severe maxillofacial trauma + Airway compromised. TOC – **Cricothyroidotomy**
- Organ associated with higher incidence of rejection in solid organ transplantation – Lungs
- Proximal dislocation of squamocolumnar junction is seen in – Sliding hiatus hernia
- **Charcot's triad** = Abdominal pain + fever + jaundice
- IOC for pheochromocytoma – MIBG scan
- TOC in benign tumor of superficial parathyroid gland - Superficial parathyroidectomy
- Bloody nipple discharge + involvement of single duct. TOC – **Microdochectomy**
- Needle insertion in thoracentesis – **Upper border of lower rib**
- Weight loss due to prolonged radiotherapy is due to – **Esophageal fibrosis**
- Swelling on neck which moves with deglutition. TOC – **Sistrunk operation**

Contd...

- Most common fluid used for management of intraoperative fluid loss during surgery – **Normal saline**
- Advice in dumping syndrome – Frequent small meals with increased protein content
- Slowing increasing swelling in front and below ears lobule. TOC – Superficial parotidectomy

RECENT CLINICAL CASES

- 10 years after mastectomy, gradually increasing swelling and heaviness in right upper limb without pain + bluish colored raised cutaneous lesion. Diagnosis – Lymphangiosarcoma
- Abdominal distension and discomfort + Diffuse intraperitoneal mucinous ascites with mucinous implants on the peritoneal surfaces + Abundant extracellular mucin with scattered neoplastic epithelial cells. Diagnosis – Mucinous Cystadenocarcinoma
- Painless testicular mass + Postorchietomy, Reinke's crystals within tumor cells. Diagnosis – Leydig cell tumor
- After cholecystectomy, fever and respiratory distress 3 days later. Diagnosis – Pulmonary embolism
- After amputation, soft tissue necrosis + crepitus + Reddish brown wound. Diagnosis – Gas gangrene
- Newborn having difficulty in breathing + multiple air fluid levels in left hemithorax. Diagnosis – Congenital diaphragmatic hernia
- Fluctuating mass on the floor of mouth (brilliantly trans-illuminant + bluish appearance). Diagnosis – Ranula
- Chronic alcoholic with severe epigastric pain radiating to the back + Elevated serum amylase and lipase levels. Diagnosis – Acute pancreatitis (Administration of 5% dextrose should be avoided)
- Breathlessness after total hip replacement surgery. Diagnosis - Venous thromboembolism
- Dysphagia, halitosis and regurgitation of food on occasions. Diagnosis – Pulsion diverticulum

Contd...

- Chronic pancreatitis + Puestow procedure. Most preferred route for supplementary nutrition – TPN
- H/O progressive dysphagia + significant weight loss over the past few months. IOC – Esophageal Endoscopy with biopsy
- H/O gastrointestinal surgery + Presents with palpable abdominal bulge at the surgical site + Reducible incisional hernia. Next step in management – Schedule for mesh repair
- Shock and hypotension + eFAST negative + X ray and ECG normal + SPO₂ 93% + BP 80/60 mm Hg + pulse rate 80/min. Type of shock – Neurogenic shock
- RTA with signs of seat belt abdominal trauma on anterior abdominal wall (signs of peritonitis) – Hollow viscus injury
- Massive hemothorax + chest tube inserted gives an output of 1800 mL. Next step – Thoracotomy
- Pain in abdomen + lump in right iliac fossa. Next step – Ochsner-Sherren regimen
- Manhole injury affecting bulbar urethra + blood at meatus, Urine is collected in – Anterior abdominal wall
- Patient who suffered RTA was brought to ER, on examination, the patient had bradycardia, GCS turned out <8, what is the next step you must take – Perform intubation

Boyd's classification

I	Intermittent claudication (Pain starts when you exercise but vanishes on the continuation of exercise. This is due to the opening of collaterals)
II	Pain starts on exercise (But the patient can manage to walk)
III	Pain starts and the patient must take rest
IV	Rest Pain

Named surgeries

Sistrunk – Excision of tissue with skin

Thompson – Excision + Tucking sign

Kontoleon – Compartment wise excision

Charle's – 360° excision + Grafting

- **Leriche syndrome** – AIOD – Claudication, erectile dysfunction, absent femoral pulse
- **Lemmel syndrome** – Obstructive jaundice due to diverticulum
- **Lemierre syndrome** – Septic thrombophlebitis of IJV

IMPORTANT RECENT POINTS (INCLUDES LATEST QS)

Most common site for polymazia is **axilla**

Amazia refers to absence of stromal and glandular part of breast but presence of nipple and areola

Tietze disease: Costochondritis, MC involves 2nd costal cartilage

Mondor's disease – Superficial thrombophlebitis of veins over chest wall and upper abdominal wall

Fibrocystic disease of breast is usually B/L and common in younger women

GOLDEN POINTS

Mastitis

MC organism: **Staph aureus**

Rx – Modified Hilton's method

IOC – USG

Breast cyst

Well-defined **lump**

IOC – USG-Guided FNAC

Rx – USG-Guided aspiration

Fibroadenoma

MC benign **tumor of breast**

Highly mobile – **Breast mouse**

MC breast tumor in females **<30 years of age**

Firm in consistency

Upon mammography: Popcorn calcification

IOC – FNAC

Rx – Excision

Nipple discharge

Bloody – Duct papilloma (MCC)

Greenish/grumous – Duct ectasia (MCC)

Milky – Galactorrhea (MCC pathologically)

Serous – Fibrocystic disease of breast (MCC)

Duct ectasia

IOC – Mammography

Rx – Hadfield's operation

Duct papilloma

IOC – Mammography

Rx – Microdochectomy

Cystosarcoma phyllodes

Huge lump

Irregular and variable consistency

IOC – FNAC

Rx- benign – Wide local excision

Malignant – Simple mastectomy

Breast cancer

Genetic – BRCA 1, BRCA 2, P53 (Li-Fraumeni syndrome)

IOC – Mammography

Ductal carcinoma in situ

MC noninvasive breast cancer

MC comedo cell pattern

IOC – Incisional biopsy

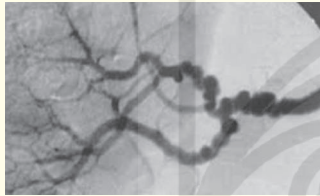
Rx – Simple mastectomy



MULTIPLE CHOICE QUESTIONS

(Most Recent Questions 2026)

MR1. A 23-year-old female with hypertension underwent renal angiography which is shown below. What is the likely cause?
(Most Recent Question Jan 2026)



- a. Fibromuscular Dysplasia
- b. Atherosclerosis
- c. Polyarteritis nodosa
- d. Granulomatosis with angiitis

MR2. A 70-year-old man underwent TURP procedure under spinal anesthesia. He is put on continuous bladder irrigation with glycine postoperatively. On day 2, he develops confusion and irritability. Labs show serum Sodium = 122 mEq/L. What is the next best step for management of this patient?
(Most Recent Question Jan 2026)

- a. Administer 3% Hypertonic Saline
- b. Change glycine to normal saline
- c. Administer IV Furosemide
- d. Intubate and ventilate

MR3. A 28-year-old HIV-positive intravenous drug user presents with a gradually increasing swelling in the right groin for 2 weeks. The swelling is painless, and shows expansile impulse. On examination, there is a thrill on palpation and dilated superficial veins around the swelling. The mass does not reduce on lying down and cough impulse is absent. What is the next best step for managing this case?
(Most Recent Question Jan 2026)

- a. Mesh Lichtenstein repair
- b. CT angiography
- c. Bassini repair
- d. Ultrasound

MR4. A young lady who works in healthcare comes with the complaints as shown in the image. There is no pitting edema in ankles. What is CEAP staging of this presentation?
(Most Recent Question Jan 2026)



- a. C1
- b. C2
- c. C3
- d. C4

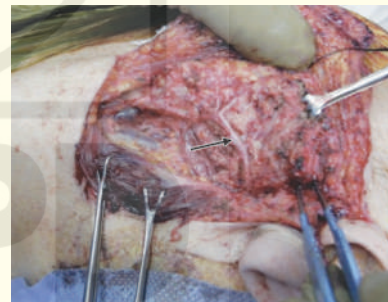
MR5. You are an intern and are putting an NG tube in patient scheduled for emergency laparotomy. During nasogastric tube insertion, obstruction is encountered at 40 cm distance from incisors. This is due to which of the following structures?
(Most Recent Question Jan 2026)

- a. Cricopharyngeal constriction
- b. Arch of aorta
- c. Left main bronchus
- d. Diaphragmatic constriction

MR6. A person got into scuffle with a pickpocket and got a stab wound on thyroid region. This injury would be classified in which zone and what is the correct management?
(Most Recent Question Jan 2026)

- a. Zone 1, surgical exploration
- b. Zone 2, surgical exploration
- c. Zone 1, conservative
- d. Zone 2, conservative

MR7. Identify the marked structure while the procedure of right superficial parotidectomy is being performed.
(Most Recent Question Jan 2026)



- a. Facial nerve
- b. Greater auricular nerve
- c. Facial artery
- d. Lingual artery

MR8. During laparoscopic cholecystectomy, lateral partial injury to the common bile duct is identified. The operating surgeon is not skilled in laparoscopic procedures. What is the most appropriate next step in management?
(Most Recent Question Jan 2026)

- a. Close the abdomen and refer to hepatobiliary surgeon
- b. Convert to open procedure with T-tube drainage
- c. Ligate the duct proximal to the injury
- d. Close the abdomen and refer for ERCP after 2 weeks

MR9. A 35-year-old lady was diagnosed of having breast mass which on core biopsy was ductal carcinoma in situ. It was treated with lumpectomy with excision margins of 2 mm. What is the next best step in management of this patient?
(Most Recent Question Jan 2026)

- a. Radiotherapy
- b. Mastectomy
- c. MRM
- d. Regular follow up

ANSWERS WITH EXPLANATIONS

MR1. Ans. (a) Fibromuscular Dysplasia

The renal angiogram shows *chain of beads* appearance that is seen in fibromuscular dysplasia. It causes renal artery stenosis in young females. Option b occurs in geriatric age group and affects ostia of renal artery. Option c will cause micro-aneurysm formation.

MR2. Ans. (a) Administer 3% Hypertonic Saline

The patient has developed TUR syndrome due to absorption of glycine via periprostatic venous plexus. Low sodium is causing neuronal edema and the patient is at risk of developing convulsions. Hence, raising serum sodium with

hypertonic saline beyond 125 mEq/L will cut down on risk of seizures.

Option b will not change the neuro damage that is already done now. If this question mentioned pulmonary edema or hypervolemia, furosemide will be the first answer.









MR3. Ans. (b) CT angiography

In an IV drug user, repeated femoral vessel puncture can produce an arteriovenous fistula in the groin. CT angiography followed by endovascular treatment with a stent placement seals communication between artery and vein. It is minimally invasive, preferred in modern practice.

MR4. Ans. (a) C1

Notice the spider veins/bluish reticular veins which along with imply C1 class by CEAP classification. Absence of pitting edema rules out C3.

CEAP Classification - Clinical (C)

Class	Finding	Key Features	Exam Clue	
C0	No visible disease	Symptoms may be present but no signs	"Pain/heaviness but normal leg"	
C1	Telangiectasia/Reticular veins	Spider veins (<1 mm), bluish reticular veins (1-3 mm)	Fine superficial veins (like your image)	
C2	Varicose veins	Dilated, tortuous veins >3 mm	Bulging veins	
C3	Edema	Pitting swelling without skin changes	Ankle swelling	
C4a	Skin changes (mild) Pigmentation, venous eczema	Pigmentation, venous eczema	Brown discoloration	
C4b	Skin changes (severe) Lipodermatosclerosis, white atrophy	Lipodermatosclerosis, white atrophy	Indurated skin, "inverted champagne bottle"	
C5	Healed ulcer	Scar of previous venous ulcer	Healed wound near medial malleolus	
C6	Active ulcer	Open venous ulcer	Non-healing ulcer	

MR5. Ans. (d) Diaphragmatic constriction

At 40 cm, the NG tube reaches the esophageal hiatus (diaphragmatic constriction) at the level of LES before entering the stomach.
Constrictions of esophagus (distance from incisors)

15 cm	Cricopharynx
23 cm	Aortic arch
28 cm	Left main bronchus
40 cm	Diaphragmatic hiatus



MULTIPLE CHOICE QUESTIONS

(Recent Questions 2025 – 2016)

GASTROINTESTINAL TRACT

- 1. A 28-year-old man presents with a 6-week history of abdominal pain, bloody diarrhea, and tenesmus. He has a known diagnosis of ulcerative colitis for the past 3 years. Over the past 3 days, he has developed pain, redness, and photophobia in his right eye. His HLA-B27 test is positive. Which of the following is the most likely extraintestinal manifestation in this patient?**

(Most Recent Question July 2025)

 - Conjunctivitis
 - Primary sclerosing cholangitis
 - Uveitis
 - Retinitis
- 2. Which classification is used for Barrett's esophagus?**

(Most Recent Question July 2025)

 - Prague
 - Savary-Miller
 - Johnson
 - Forrest
- 3. Which of the following is a recommended treatment for esophageal varices?**

(Most Recent Question July 2025)

 - Endoscopic ligation
 - Transjugular intrahepatic portosystemic shunt
 - Nadolol
 - Octreotide
- 4. A follow-up patient of peptic ulcer disease on endoscopy was having a nodule in the 2nd part of duodenum, which hormone you are suspecting to be raised?**

(Most Recent Question July 2025)

 - Gastrin
 - Insulin
 - VIP
 - Glucagon
- 5. What is the most appropriate treatment for an 8 cm chylolymphatic mesenteric cyst?**

(Most Recent Question July 2025)

 - Aspiration
 - Enucleation
 - Resection of cyst along with adjacent bowel
 - Conservative
- 6. What is the source of bleeding in gastric ulcers?**

(Most Recent Question July 2025)

 - Gastrooduodenal artery
 - Left gastric artery
 - Gastroepiploic artery
 - Right gastric artery
- 7. A 35-year-old man is undergoing elective splenectomy for chronic ITP. Which of the following sites should the surgeon look for accessory spleen during the operation?**

(Most Recent Question Jan 2025)

 - Splenic hilum
 - Omentum
 - Tail of pancreas
 - Small intestinal bowel loops
- 8. Which blood vessel is most likely to be injured during secondary port placement with lateral trocar for laparoscopic surgery?**

(Most Recent Question Jan 2025)

 - Superficial circumflex iliac artery
 - Inferior epigastric artery and superior epigastric artery
 - Abdominal aorta
 - External iliac artery
- 9. A 30-year-old patient is having blood in stool for past 3 days with abdominal discomfort. He has flask-shaped ulcers in colon. Which of the following is the best treatment for this condition?**

(Most Recent Question July 2024)

 - IV Metronidazole
 - Oral Metronidazole
 - Oral Metronidazole with paromomycin
 - IV Metronidazole with paromomycin
- 10. What is the common incision used for an appendectomy?**

(Most Recent Question July 2024)

 - Kocher's
 - Grid iron
 - Midline incision
 - Battle incision
- 11. A patient underwent endoscopy, during the procedure perforation occurred at 25 cm from the incisors. Which structure is likely to be damaged?**

(Most Recent Question July 2024)

 - Diaphragm
 - Arch of aorta
 - Right main bronchus
 - T10
- 12. A 50-year-old male is brought to ER with sudden onset of severe chest pain radiating to the left shoulder following binge drinking and heavy meals. Pneumomediastinum was present. What is the likely diagnosis?**

(Most Recent Question July 2024)

 - Variceal bleeding
 - Esophageal perforation
 - Pneumoperitoneum
 - Peptic ulcer
- 13. A 30-year-old lactating lady presented to OPD with complaints of pain in both breasts with fever. On clinical examination, skin is looking red, shiny and edematous. The left nipple is stretched and has cracks. What should be the preferred management?**

(Most Recent Question July 2024)

 - Mammography
 - Incision and drainage
 - Expression of milk and warm/cold compresses
 - Oral antibiotics
- 14. A patient consumed large amount of food and alcohol. He subsequently had multiple vomiting episodes followed by chest pain and pneumomediastinum. Which of the following condition is responsible?**

(Most Recent Question July 2024)

 - Pulsion diverticulum
 - Boerhaave syndrome
 - Mallory Weiss syndrome
 - Pericarditis
- 15. In solid organ transplantation, which organ is associated with a highest incidence of acute cellular rejection?**

(Most Recent Question Jan 2024)

 - Lungs
 - Intestine
 - Kidney
 - Liver
- 16. Most children with extrahepatic biliary atresia, will develop jaundice at which age?**

(Most Recent Question Jan 2024)

 - <24 hours
 - <7 days
 - <2 weeks
 - >2 weeks

ANSWERS WITH EXPLANATIONS

GASTROINTESTINAL TRACT

1. Ans. (c) Uveitis

Ref: Bailey and Love's Short Practice of Surgery, 28th ed. pg. 1320

- In the given clinical scenario, the patient has a known diagnosis of ulcerative colitis for the past 3 years along with eye pain, redness, photophobia, decreased vision which are all signs of uveitis more specifically anterior uveitis.
- Uveitis is also strongly associated with HLA-B27 positive conditions, including ulcerative colitis. This is the classic extraintestinal manifestation of UC affecting the eye.
- Option a Conjunctivitis is an ocular manifestation in inflammation bowel syndrome but is usually associated with mild redness, irritation, and watery eyes. It is not associated

with photophobia and severe pain which is present in this case.

- Option b Primary sclerosing cholangitis is a hepatobiliary complication of ulcerative colitis. It presents with jaundice, pruritus, hepatomegaly, elevated ALP.
- Option d, Retinitis is a chronic complication, not an acute ocular manifestation of ulcerative colitis. It is seen in viral infections like CMV retinitis in immunocompromised patients.

Extra Mile

Extraintestinal manifestations of ulcerative colitis include:

- **Musculoskeletal:** Arthritis, ankylosing spondylitis (HLA-B27 linked)
- **Ocular:** Episcleritis, uveitis
- **Hepatobiliary:** Primary sclerosing cholangitis
- **Dermatological:** Erythema nodosum, pyoderma gangrenosum

2. Ans. (a) Prague

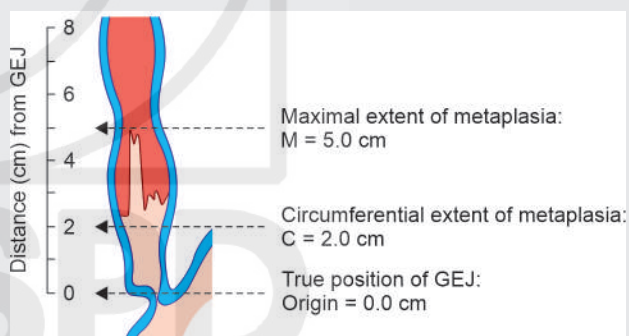
Ref: Harrison 22nd ed. pg. 2510

Prague classification is used to determine C: circumferential extent of metaplasia and M: Maximal extent of metaplasia.

Option b is for GERD.

Option c is for PUD

Option d is for upper GI bleeding



3. Ans. (a) Endoscopic ligation

Ref: Bailey and Love: 27th ed. pg. 1164

Endoscopic variceal ligation is the standard treatment for both acute management and prophylaxis of esophageal varices. TIPS is done for refractory bleeding. Nadolol is the drug of choice for nonbleeding varices. Octreotide is the drug of choice for variceal bleeding.

4. Ans. (a) Gastrin

Ref: Harrison 22nd ed. pg. 3081

In a patient with peptic ulceration, a nodule in the 2nd part of duodenum is highly suspicious for gastrinoma/Zollinger-Ellison syndrome. Hence, fasting gastrin levels must be evaluated on priority. Insulin and glucagon will affect blood glucose values and are ruled out. VIP will cause secretory diarrhea and is ruled out.

? Image-Based Questions

1. Which of the following structures causes this defect?
(Most Recent Questions July 2025)



- a. Cooper's ligament
- b. Lactiferous duct
- c. Dermal lymphatics
- d. Suspensory fascia

4. Identify the type of ulcer.
(Most Recent Questions July 2025)



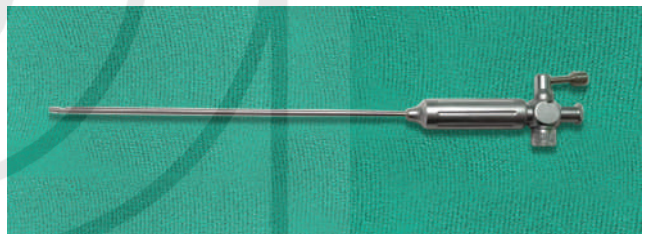
- a. Arterial ulcer
- b. Venous ulcer
- c. Diabetic ulcer
- d. Neuropathic

2. What will be the diagnosis of the given image?
(Most Recent Questions July 2025)



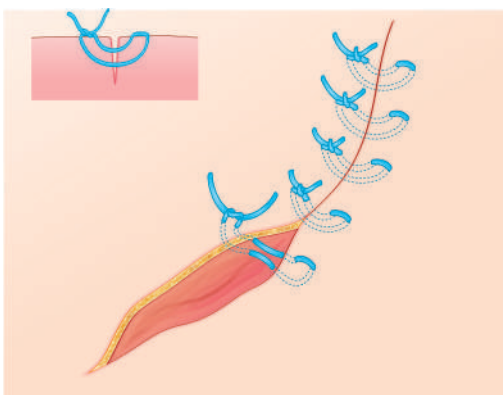
- a. Spigelian hernia
- b. Incisional hernia
- c. Umbilical hernia
- d. Paraumbilical hernia

5. Identify the given instrument.
(Most Recent Question Jan 2025)



- a. Veress needle
- b. Hasson's cannula
- c. Jamshidi needle
- d. Trocar

3. Identify the types of sutures.
(Most Recent Questions July 2025)



- a. Vertical mattress
- b. Horizontal mattress
- c. Subcuticular suture
- d. Simple interrupted suture

6. A 4-year-old boy was brought to the ER with complaints of right iliac fossa pain and melena episode. On surgical exploration, the following structure was found. What is the diagnosis?
(Most Recent Question Jan 2025)



- a. Meckel's diverticulum
- b. Appendicitis
- c. Carcinoid tumor
- d. Enterogenous cyst

EXPLANATIONS OF IMAGE-BASED QUESTIONS

1. Ans. (a) **Cooper's ligament**

Ref: *Bailey and Love 27th ed. pg. 860*

Cooper's ligaments are suspensory ligaments that support the breast by attaching it to the overlying skin. In invasive breast carcinoma, cancer cells infiltrate and shorten these ligaments. This causes **tethering of the skin, leading to dimpling and fixation of skin**

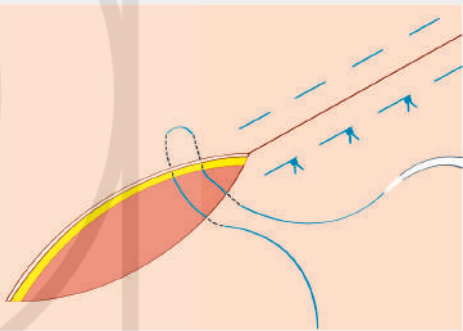
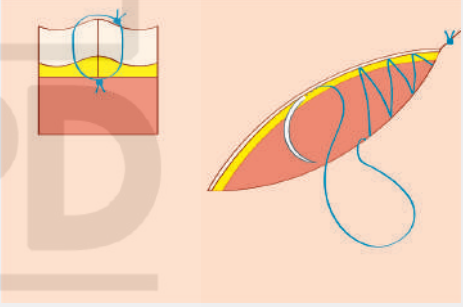
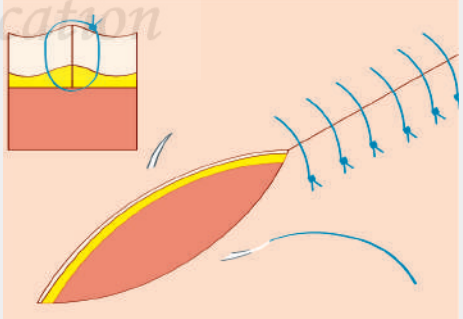
2. Ans. (d) **Paraumbilical hernia**

- The image shows herniation of contents via anterior abdominal wall and part of umblicus in an adult patient.
- This is a paraumbilical hernia.

3. Ans. (a) **Vertical mattress**

Ref: *Bailey & Love's Short Practice of Surgery, 28th ed. pg. 107,108*

- In the given image, we can see that deep pass and the superficial pass vertically aligned which is classic vertical mattress.
- In Mattress sutures, they may be either vertical or horizontal and tend to be used to produce either eversion or inversion of a wound edge like seen in the above image.

Type of suture	Description	Presentation
Horizontal mattress	<ul style="list-style-type: none"> • The bites run parallel to wound edges, not vertical. • Used for fragile skin like where there is vascular compromise. 	
Subcuticular suture	<ul style="list-style-type: none"> • Runs within the dermis, parallel to the skin surface. • Leaves no external stitch marks hence best for cosmetic closure. 	
Simple interrupted suture	<ul style="list-style-type: none"> • Each stitch is a single pass across the wound, tied individually and no far-near component is seen. • It is used for general closure of contaminated wounds. 	

4. Ans. (b) **Venous ulcer**

Ref: *Sabiston Textbook of Surgery 21st ed. pg. 1937*

- The image shows a nonhealing ulcer above medial malleolus in skin of Gaiter region, the area between muscles of calf and ankle.
- It is associated with hyperpigmentation of skin due to hemosiderin deposition. This is a feature of venous ulcer.
- This is the region where the Cockett perforators join the posterior tibial vein to surface vein called posterior arch vein.
- Option a is seen on dorsum of foot at location of dorsalis pedis

ANESTHESIA

SYNOPSIS

RECENT PYQs NEET-PG

- Epidural anesthesia – Arachnoid membrane is not pierced
- Desflurane – Blood gas partition coefficient similar to nitrous oxide
- 0.5% bupivacaine develops hypotension and arrhythmias. 1st line of t/t – 20% intralipid infusion
- Contraindication for the use of Bilevel positive airway pressure (BiPAP) – Unconsciousness
- Initial airway management in severe maxillofacial trauma – Tracheostomy
- DOC for preoperative antibiotic prophylaxis undergoing cardiac surgery – Cefazolin
- Highest iliac crest point for needle insertion: L4-L5
- NaHCO₃ is not used in ACLS
- CO₂ is used to create pneumoperitoneum for laparoscopy.
- Endotracheal tube is replaced by cuffed tracheostomy tube.
- LA used for intravenous regional anesthesia – Lignocaine
- Resistance of the Ryle's tube is because of – Diameter
- Device maintaining fraction of O₂ from 0.5 to 2 irrespective of the respiratory effort – Venturi mask
- **Guedel's stages of ether anesthesia**
 - Stage 1 analgesia
 - Stage 2 delirium
 - Stage 3 surgical anesthesia
 - Stage 4 medullary paralysis.
- Nitric oxide produces second gas effect and fink phenomenon.
- Direct measurement of BP done in **Radial artery**.
- Neuromuscular monitoring performed at **ulnar nerve**.
- Sufentanil is the most potent opioid.
- Remifentanil is the shortest acting opioid.
- **Alfentanil** is an opioid of choice for day care surgery
- Muscle relaxant of choice in shock: **Pancuronium**
- Most cardiostable anesthetic agent: **Etomidate**

- Most cardiostable inhalational agent **Isoflurane**
- Most cerebroprotective inhalational agent **Sevoflurane**
- Whitacre and Sprotte procedure are used for: **Spinal anesthesia**
- **Successful sign of spinal anesthesia:** Flaccid and engorged penis (Reason: Nervi ergentis paralysis)
- **Sequence of block by local anesthesia:** Temperature (cold > Hot) – pain – touch – deep pressure – proprioception
- Nerve fiber sensitivity to pressure: **A > B > C**
- Nerve fiber sensitivity to hypoxia: **B > A > C**
- Nerve fiber sensitivity to LA: **A gamma, A Delta > Aα and Aβ**
- Anesthetic agents contraindicated in porphyria: **Pentazocine, Etomidate, Thiopentone (PET)**
 - DOC in such condition: **Propofol**
- Protein intake in ICU: **1–1.5 g/kg/day**
- Most common ophthalmic complication during anesthesia: **Corneal abrasion.**
- History of postdural puncture headache is not a contraindication of epidural block
- **Flat capnogram is seen in:**
 - Accidental extubation
 - Dissociation of anesthetic tube
 - Mechanical ventilation failing
- O₂ content of anesthetic mixture: **33%**
- Preanesthetic drug which causes longest amnesia: **Lorazepam**
- Anesthetic with least decrease in systemic vascular resistance: **Halothane**
- MC anesthetic agent causes Malignant hyperthermia: **Sch**
- LA having highest incidence of systemic toxicity: **Lignocaine**
- Inhalational test having highest incidence of malignant hyperthermia: **Halothane**
- Malignant hyperthermia is caused by: **Ryanodine receptor**
- Dextrose fluid is never used for resuscitation
- Opioid given as transdermal: **Fentanyl**

Contd...

MULTIPLE CHOICE QUESTIONS

(Most Recent Questions 2026)



MR1. Which of the following intravenous agents is commonly used for day-care procedures?

(Most Recent Question Jan 2026)

- a. Propofol
- b. Ketamine
- c. Thiopental
- d. Etomidate

MR2. For a pre-anesthetic evaluation, a patient is asked to open his mouth and protrude his tongue while sitting upright. According to the Mallampati classification, what is the airway grade?

(Most Recent Question Jan 2026)



- a. Type 1
- b. Type 2
- c. Type 3
- d. Type 4

MR3. Identify the needle shown in the image.

(Most Recent Question Jan 2026)



- a. Quincke spinal needle
- b. Tuohy epidural needle
- c. Huber needle
- d. Veress needle

MR4. A patient with COPD is scheduled for elective abdominal surgery. Which of the following measures is most effective in reducing the risk of postoperative pulmonary complications?

(Most Recent Question Jan 2026)

- a. Give antibiotics
- b. Wait for 3 months
- c. Smoking cessation
- d. Oxygen therapy

MR5. A patient undergoing surgery shows a sudden drop of end-tidal CO₂ (ETCO₂) to zero on capnography. What does this most likely indicate?

(Most Recent Question Jan 2026)

- a. Hypothermia
- b. Hyperthermia
- c. Embolism
- d. Hypotension

CBSPD
Dedicated to Education

74. At a random place you saw a guy collapsed. You started CPR after checking vitals and soon advance cardiac support arrived at the scene. What should be the next step of management? (Recent Pattern Question June 2022)
- Handover patient to them and leave
 - Ask them to apply the paddles while you continue CPR
 - Stop CPR and left them apply the paddles
 - Continue 1 round of CPR and then use defibrillator
75. Before laparoscopic surgery, what advise should be given to the patient by surgeon? (Recent Pattern Question June/Dec 2021)
- NPO 8–12 hours before OT
 - NPO 24 hours before OT
 - On the table hair removal by razor
 - None of the above
76. A patient with uterine fibroid is suffering from moderate to severe cardiac ailment. Which of the following should be avoided? (Recent Pattern Question Dec 2019-20)
- Subtotal hysterectomy
 - Total hysterectomy
 - Laparoscopic hysterectomy
 - Vaginal hysterectomy
77. Which is not a complication of giving anesthesia to a chronic smoker?
- Intraoperative bronchospasm
 - Increased mucosal clearance
 - Atelectasis
 - Postoperative pneumonia
83. The proper ET tube position is best confirmed by: (Recent Pattern Question 2018-19)
- Mapleson circuit
 - Capnography
 - Laryngeal mask airway
 - Bag mask ventilation
84. Instructions for routine intubation are all; except:
- Head tilt
 - Chin lift
 - Cricoid pressure
 - Jaw thrust
85. According to ASA what is the initial management for cardiac arrest:
- Secure airway
 - Carotid pulse palpation
 - IV adrenaline
 - Cardiac compression
86. Sellick's maneuver is used:
- To prevent alveolar collapse
 - To prevent gastric aspiration
 - To facilitate respiration
 - To reduce dead space
87. Factor favoring fat embolism in a patient with major trauma is:
- Hypovolemic shock
 - Respiratory failure
 - Diabetes
 - Mobility of fracture
88. Anesthetic agent not metabolized by body:
- N₂O
 - Gallamine
 - Sevoflurane
 - Halothane

INTRA-OP AND POST-OP PATIENT CARE

78. Which of the following drugs is used to reverse the effects of nondepolarizing muscle relaxant (NDMR)? (Recent Pattern Question July 2024)
- Neostigmine
 - Atropine
 - Glycopyrrolate
 - Midazolam
79. In epidural anesthesia which of the following layers is least likely to be punctured during the procedure? (Recent Pattern Question Jan 2024, June/ Dec 2021)
- Arachnoid mater
 - Ligamentum flavum
 - Supraspinatus
 - Infraspinalus
80. A patient who received a supraclavicular brachial plexus block with 0.5% Bupivacaine develops hypotension and arrhythmias. What is the first-line treatment for this condition? (Recent Pattern Question Jan 2024)
- Invasive ventilation
 - 20% intralipid infusion
 - Sodium bicarbonate
 - Cardiopulmonary resuscitation (CPR)
81. A COPD patient admitted in ICU was on oxygen therapy with mask with 2 liter of oxygen. He was found to be hypoventilating. His pCO₂ on blood gas analysis was 64 mm Hg. Which of the following should be done? (Recent Pattern Question June/Dec 2021)
- Increase the FiO₂
 - Decrease the FiO₂
 - Start BIPAP
 - Intubate and start ventilator
82. Endotracheal tube in the esophagus is best assessed by:
- CO₂ exhalation (Recent Pattern Question Dec 2019-20)
 - Chest wall movement
 - Auscultation
 - Chest tube passes through vocal cords

MISCELLANEOUS

89. A patient with maxillofacial trauma cannot be intubated or ventilated. What is the next most appropriate airway intervention. (Most Recent Question July 2025)
- Insert a laryngeal mask airway
 - Insert a nasopharyngeal airway
 - Perform a tracheostomy
 - Perform a cricothyroidotomy
90. According to the American Heart Association (AHA), what is the 6th link added to the chain of survival? (Most Recent Question Jan 2025)
- Rapid defibrillation
 - Recovery and rehabilitation
 - High-quality CPR
 - Advanced airway management
91. In case of 2-rescuer CPR, what is the correct compression to ventilation ratio for adults? (Recent Pattern Question July 2024)
- 30:1
 - 30:2
 - 15:1
 - 15:2
92. Which of the following conditions is a contraindication for the use of Bi-level Positive Airway Pressure (BiPAP)? (Recent Pattern Question Jan 2024)
- Obstructive sleep apnea
 - Unconsciousness
 - High oxygen levels
 - Low partial pressure of oxygen
93. Heimlich maneuver is performed to dislodge foreign body located in: (Recent Pattern Question 2017)
- Esophagus
 - Bronchus
 - Trachea
 - Upper stomach

ANSWERS WITH EXPLANATIONS

LOCAL ANESTHETICS

1. Ans. (c) Proparacaine 0.5%

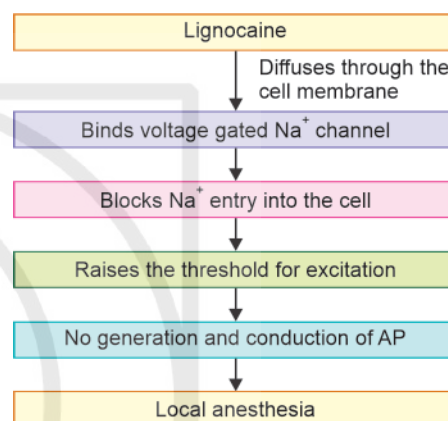
Ref: Morgan & Mikhail's Clinical Anesthesiology, 8th ed. pg. 589

- **Proparacaine** is a commonly used topical anesthetic in ophthalmology. It provides rapid and effective anesthesia for procedures involving the eye, such as cataract surgery. It is well-tolerated and has a quick onset and short duration of action, making it ideal for brief procedures.
- **Bupivacaine** is a long-acting local anesthetic commonly used for regional anesthesia, including spinal and epidural anesthesia, but it is not typically used as a topical anesthetic for eye surgeries like cataract surgery.
- **Lignocaine** 2% is also known as lidocaine, this local anesthetic is commonly used for infiltration, nerve blocks, and intravenous regional anesthesia. While it can be used topically in some applications, it is not the standard choice for cataract surgery.
- **Ropivacaine** is a long-acting local anesthetic similar to bupivacaine. It is used for regional anesthesia and pain

management but is not typically used as a topical anesthetic for eye surgeries.

2. Ans. (a) Sodium channel

Local anesthetics like lidocaine act by Na⁺ channel blockade → prevent generation and conduction of nerve impulse.



3. Ans. (d) All of these

Definitions of dental local anesthetic injections

Infiltration	Injection of local anesthetic directly into an area of terminal nerve endings. (Superficial and infiltration anesthesia are collectively referred to as topical anesthesia)
Field block	Submucosal injection of a local anesthetic affecting the nerve branches in an area bordering the field to be anesthetized, typically providing pulpal anesthesia of one or two teeth. Field blocks are commonly referred to as "infiltrations".
Peripheral nerve block	Injection of local anesthetic in the vicinity of a peripheral nerve to anesthetize that nerve's entire area of innervation, which is also referred to as a "nerve block" "mandibular block," "division 2 block," or "block"
Regional anesthesia	Rendering a specific area of the body unresponsive to stimuli; all types may be used to accomplish regional anesthesia including topical and infiltration anesthesia. Generally refers to the anesthesia provided by field and peripheral nerve block techniques

4. Ans. (c) Ephedrine

Ref: Goodman & Gillman 13th ed. pg. 415

- Hypotension is commonly associated with spinal anesthesia.
- Treatment of hypotension is usually warranted when the BP decrease to about 30% of resting values.
- Aim of therapy: To maintain brain and cardiac perfusion and oxygenation

Treatment of hypotensive episode:

- Prior to spinal anesthesia a bolus of fluid (500–1000 mL) is administered
- Usual cause of hypotension is decreased venous return, possibly complicated by decreased heart rate, drugs with preferential vasoconstrictive and chronotropic properties are preferred.
- **Drug of choice:** Ephedrine, 5–10 mg intravenously.
- **Other treatment options:** Phenylephrine, oxygen, fluid infusion, administration of vasoactive drugs.

Extra Mile

- Noradrenaline, a sympathomimetic agent, itself causes reflex bradycardia.
- Phenyelzine is one of the MAO inhibitor, has no role
- Na⁺ Nitroprusside: Strong vasodilator. It can precipitate hypotension

5. Ans. (b) Lidocaine

Ref: Goodman & Gillman 13th ed. pg. 418

- Among the given choices, lidocaine is the shortest acting local anesthetic agent.
- Lidocaine can be used as several forms of anesthesia and duration of action varies:
 - Local anesthesia: ~30
 - Nerve block: 60–90
 - Spinal/Epidural anesthesia: 60–90 minutes

? Image-Based Questions

1. What does the following waveform represent?

(Most Recent Question July 2025)



- a. Functional residual capacity
- b. Tidal volume
- c. Arterial oxygen saturation
- d. End-tidal CO₂

5. What is true about the nasal cannula shown in the image?

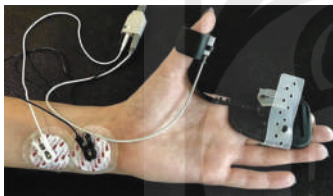
(Recent Pattern Question Jan 2023)



- a. FiO₂ is 0.24 to 0.45
- b. FiO₂ is 1.25 to 1.55
- c. FiO₂ is 0.844 to 0.490
- d. FiO₂ is 1.26 to 1.55

2. Comment on the nerve being tested during Train-of-Four monitoring.

(Most Recent Question July 2025)



- a. Radial
- b. Ulnar
- c. Median
- d. Anterior interosseous nerve

6. A 30-year-old male was involved in a roadside accident. He presented to the hospital and underwent a tracheostomy. Subsequently, an endotracheal tube was inserted. Which of the following factors mainly affects air resistance in the endotracheal tube?

(Recent Pattern Question Jan 2023)



- a. Balloon size
- b. Width
- c. Length
- d. Radius

3. What is the function of the marked structure on the image?

(Most Recent Question July 2025)



- a. Suctioning of lower respiratory tract secretions
- b. Monitoring of airway pressure
- c. Prevention of aspiration
- d. Improved vocal cord visualization

7. Identify the instrument given in the image below.

(Recent Pattern Question June/Dec 2021)



- a. Anesthesia face mask
- b. Nebulizer
- c. High flow nasal cannula
- d. Venturi mask

4. For what purpose is this device used?

(Recent Pattern Question July 2023)



- a. In spinal anesthesia
- b. In epidural anesthesia
- c. To create pneumoperitoneum
- d. In lumbar puncture

8. A patient with COVID-19 requires oxygen therapy. Which of the following cylinders should be used to provide oxygen to this patient?

(Recent Pattern Question June/Dec 2021)



- a. A
- b. B
- c. C
- d. D