<table>
<thead>
<tr>
<th></th>
<th>AIIMS November 2017 Questions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Explanations</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>AIIMS May 2017 Questions</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>241</td>
</tr>
<tr>
<td>3</td>
<td>AIIMS November 2016 Questions</td>
<td>457</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>481</td>
</tr>
<tr>
<td>4</td>
<td>AIIMS May 2016 Questions</td>
<td>657</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>673</td>
</tr>
<tr>
<td>5</td>
<td>AIIMS November 2015 Questions</td>
<td>873</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>889</td>
</tr>
<tr>
<td>6</td>
<td>AIIMS May 2015 Questions</td>
<td>1089</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>1105</td>
</tr>
<tr>
<td>7</td>
<td>AIIMS November 2014 Questions</td>
<td>1273</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>1289</td>
</tr>
<tr>
<td>8</td>
<td>AIIMS May 2014 Questions</td>
<td>1417</td>
</tr>
<tr>
<td></td>
<td>Explanations</td>
<td>1433</td>
</tr>
</tbody>
</table>
**ANATOMY**

1. Which of the following is not the branch of external carotid artery in Kinmonth’s pleat?
   a. Auricular and posterior ethmoidal
   b. Sphenopalatine artery
   c. Gastropleural artery
   d. Sural branch of superior laryngeal artery

2. Structures passing through the central tendon of the diaphragm are:
   a. Esophagus
   b.orta
   c. SVC
   d. Sympathetic chain

3. Thalamoventromedular tract is what type of tract?
   a. Saddle
   b. Ellipsoid
   c. Pallial
   d. Ball and socket

4. Marked structures in the given image connects which of the following?

   a. Sinus coronarius
   b. Orbital cortex
   c. Ethmoidal
   d. Sphenoid

5. Developments of the heart is from which of the following?

   a. Endocardium
   b. Pericardium
   c. Ectoderm
   d. Sarcolemma

6. Which of the following sinus grows till early adulthood?

   a. Frontal
   b. Maxillary
   c. Sphenoid
   d. Ethmoidal

7. Which of the following refers to the lateral semicircular canal in the specimen of cortical mastoidectomy with marked region of the given slide?

   a. Labyrinthine artery
   b. Spinal accessory nerve
   c. Hypoglossal nerve
   d. Labyrinthine artery

8. Which of the marked muscle helps in the opening of jaw?

   a. Adductor muscle
   b. Abductor muscle
   c. Orbicularis oris
   d. pterygoid

9. What is the shape of the trapezius muscle?

   a. Strap
   b. Quadrangular
   c. Triangular
   d. Trapezius

10. Which of following is not the branch of external carotid artery?

    a. Occipital
    b. Facial
    c. Maxillary
    d. Auricular

11. Identify the marked nerve:

    a. Abducens nerve
    b. Spinal accessory nerve
    c. Hypoglossal nerve
    d. Labyrinthine artery

12. What is the role of vasomotor centre in?

    a. S.I-2
    b. L.I-2.5
    c. L.I-3
    d. S.I-2.5

13. All of the following are true about grey communicans except:

    a. Cushing reflex
    b. Bainbridge reflex
    c. Decortication
    d. J-reflex

14. Which of the following refer to the lateral semicircular canal in the specimen of cortical mastoidectomy with marked region of the given slide?

    a. Labyrinthine artery
    b. Spinal accessory nerve
    c. Hypoglossal nerve
    d. Labyrinthine artery

15. Which of the following layer contains abundant desmosomes?

    a. Adventitia
    b. Media
    c. Intima
    d. Lamina propria

16. Which of the following refers to the lateral semicircular canal in the specimen of cortical mastoidectomy with marked region of the given slide?

    a. Labyrinthine artery
    b. Spinal accessory nerve
    c. Hypoglossal nerve
    d. Labyrinthine artery

17. Slow waves are generated by:

    a. Myenteric plexus
    b. Smooth muscle
    c. Interstitial cells of Cajal
    d. Pancreatic sympathetic neuron

18. Reflex responsible for tachycardia during right atrial distention

    a. Bainbridge reflex
    b. Carotic reflex
    c. Cardiac reflex
    d. J-reflex

19. Identify the stage of sleep from the given picture:

    a. Stage I NREM
    b. Stage II NREM
    c. Stage III NREM
    d. REM

20. Identify the hormones from the picture:

    a. Growth hormone
    b. Cortisol
    c. Estrogen
    d. Insulin

21. Feed forward control system is employed during the regulation of:

    a. Blood volume
    b. pH
    c. Temperature
    d. Blood pressure

22. Different arteriolar constriction causes all of the following except:

    a. Decreases in GFR
    b. Decreases renin release
    c. Decreases renin release in peritubular capillaries
    d. Increases hydrostatic pressure in glomerular capillaries

23. Difference in trajectory between inspiratory loop and the expiratory loop in the curve is due to:

    a. Difference in alveolar pressure during inspiration and expiration
    b. Difference in concentration of surfactant during inspiration and expiration
    c. Difference in artery resistance during inspiration and expiration
    d. Inspiration is active and expiration is passive

24. Absolute refractory period is due to:

    a. Opening of calcium channels
    b. Closure of sodium channels
    c. Closure of active gates of sodium channel
    d. Closure of inactive gates of sodium channel
ANATOMY

1. Ans. a. Anterior and posterior ethmoidal

Anterior and posterior ethmoidal arteries are branches of ophthalmic artery, which in turn is a branch of external carotid artery. Sphenopalatine and greater palatine arteries are branches of maxillary artery, which in turn is branch of external carotid artery. Superior labial artery is the branch of facial artery, which in turn is branch of external carotid artery.

“Little’s area: It is situated in the anterior inferior part of nasal septum, just above the vestibule. Four arteries, anterior ethmoidal, sphenopalatine, greater palatine, and septal branch of superior labial artery anastomose here to form a vascular plexus called “Kiesselbach’s plexus”. This area is exposed to the drying effect of inspiratory current and to finger nail trauma, and is the usual site for epistaxis in children and young adults.” - Dhingra 7/e p197

2. Ans. c. IVC

Inferior vena cava (IVC) passes through central tendon of diaphragm.

“The vena caval aperture, the highest of the three large openings, lies at about the level of the disc between the eighth and ninth thoracic vertebrae. It is quadrilateral, and located at the junction of the right leaf with the central area of the tendon, and its margins are aponeurotic. It is traversed by the inferior vena cava, which adheres to the margin of the opening, and by some branches of the right phrenic nerve.” - Gray’s 40/e p1008
1. The following coronal section of the abdomen is showing the relations of epiploic foramen. Which of the following structure forms its superior boundary as indicated in the figure below?
   a. Lesser omentum
   b. Duodenum
   c. Inferior vena cava
   d. Caudate lobe of liver

2. The following is the representation of a cervical vertebra. Which part lies in relation with the third part of vertebral artery?
   a. A
   b. B
   c. C
   d. D

3. Nucleus pulposus of intervertebral disc is a derivative of which of the following germ layers?
   a. A
   b. B
   c. C
   d. D

4. Which of the following part of scapula can be palpated in the infraclavicular fossa?
   a. A
   b. B
   c. C
   d. D

5. The following picture shows various foramina at the skull base. Mandibular nerve passes through which of the following foramen?
   a. A
   b. B
   c. C
   d. D

6. A patient came with inability to move his 4th and 5th digit, cannot hold a pen and he was not able to hold a piece of paper between his fingers. Which of the following is the probable cause of injury to the nerve in the question?
   a. Alzheimer’s disease
   b. Huntington’s chorea
   c. Paralysis agitans
   d. Dementia

7. A 5 years old child presented with absence of thymus, hypoparathyroidism and tetany. Which of the following is defective in this case?
   a. A
   b. B
   c. C
   d. D

8. An area has been marked in the coronal section of the brain below. Defect in this area will lead to what pathology?
   a. Alzheimer’s disease
   b. Huntington’s chorea
   c. Paralysis agitans
   d. Dementia

9. The muscle labeled in the following cross section is responsible for which movement of the jaw?
   a. Protrusion
   b. Elevation
   c. Retraction
   d. Depression

10. The arrow marked structure in the given picture connects which of the following structures?
    a. Hippocampus
    b. Amygdala
    c. Mammillary bodies
    d. Insular cortex
ANATOMY

1. Ans. d. Caudate lobe of liver
(Ref: Gray's 41/e p107)

Caudate lobe of liver forms the superior boundary of epiploic foramen.

“The epiploic foramen (foramen of Winslow, aditus to the lesser sac), is a short, vertical slit, usually 3 cm in height in adults, in the upper part of the right border of the lesser sac. It leads into the greater sac. The hepatoduodenal ligament, which is formed by the thickened right edge of the lesser omentum extending from the first and second parts of the duodenum, forms the anterior border of the foramen. The anterior border contains the falciform ligament (on the left), portal vein (posteriorly) and hepatic artery (on the left) between its two layers. Superficially the peritoneum of the posterior layer of the hepatoduodenal ligament runs over the caudate lobe of the liver which forms the roof of the epiploic foramen.” —Gray’s 41/e p107

2. Ans. c. C
(Ref: Alim’s 41/e p283)

Third part of vertebral artery, which passes over the posterior aspect of atlas vertebra is represented by “C”.

“The vertebral artery descends in the neck through the transverse processes of the upper six cervical vertebrae. It passes medially above the posterior arch of the atlas and then ascends through the foramen magnum into the skull. On reaching the superior surface of the occipital condyle of the base of the skull, the vertebral artery divides into its two terminal branches, to form the basilar artery.” —Gray’s 41/e p283

“The vertebral artery ascends in the neck through the transverse processes of the upper six cervical vertebrae. It passes medially above the posterior arch of the atlas and then ascends through the foramen magnum into the skull. On reaching the superior surface of the occipital condyle of the base of the skull, it joins its fellow vertebral artery from the opposite side to form the basilar artery.” —Gray’s 41/e p283

Explanations

Principle Maneuver (Total Inflow Occlusion)

- Total clamping of hepatic pedicle, by placing an atraumatic clamp across the hepatomesentery or of the origin of hepatic pedicle, or by placing an atraumatic clamp across the origin of hepatic pedicle, or by placing an atraumatic clamp across the origin of hepatic pedicle.
- Appropriate-sized vascular clamp or loop snare can easily control hemorrhage from portal vein (effectively); & hepatic arteries.
- It doesn’t control bleeding from IVC & hepatic veins.

If short occlusion durations of up to 30 minutes can be tolerated safely in cirrhotic livers and possibly up to 60 minutes in early disease.

If prolonged occlusion is required, intermittent clamping can be used with repeated clippings of 10-20 minutes duration, each followed by 5 minutes declamping.

Boundaries of Epiploic Foramen

Anterior = Hepatoduodenal ligament & portal triad
Superior = Hepatic arteries, portal vein & IVC
Posterior = Transverse part of hepatic artery
Superior = Caudate process of caudate lobe of liver & inferior layer of coronary ligament
Inferior = 1st part of duodenum & transverse part of hepatic artery
Left lateral = Splanchnic & gastroepiploic ligament

Purpose of Hepatic Artery

- Cervical part: Extends from origin to foramen transversarium of C6 vertebrae. This part lies in the transverse processes.
- Subclavian part: Extends from foramen transversarium of C7 vertebrae to subclavian trifurcation. This part lies within the subclavian trifurcation.
- Intrathoracic part: Extends from subclavian trifurcation to aorta. This part lies within the thoracic aorta.