

ANATOMY CVS 2024
SUGGESTED QUESTIONS FOR THE
MIDTERM

MEDIASTINUM & PERICARDIUM – FILE 1:

1. The heart has a pyramidal shape with a specific kind of orientation, the apex of this pyramid has which of the following orientation inside the middle mediastinum:

- A. Posterior inferior pointing to the left.
- B. Anterior inferior pointing to the left.
- C. Posterior superior pointing to the left
- D. Anterior inferior pointing to the right

ANSWER: B

2. Which of the following mediastinal contents is located the MOST posterior in relation to the others:

- A. Esophagus.
- B. Aorta.
- C. Brachiocephalic veins.
- D. Sympathetic trunk.
- E. Vertebral bodies.

ANSWER: **D, NOT E**, THE QUESTION MENTIONED **CONTENTS NOT BORDERS**

3. Which of the following matches is CORRECT:

- A. Left side of the heart - azygos vein.
- B. Right side of the heart - aortic arch.
- C. Bronchi - within the inferior mediastinum.
- D. Superior vena cava - within the superior mediastinum.

ANSWER: D

4. Which of the following is a structure that loops around the right subclavian artery on the right and the aortic arch on the left BEFORE returning up:

- A. Left recurrent laryngeal nerve.
- B. Thoracic trunk.
- C. Right recurrent laryngeal nerve.
- D. Vagus nerve.
- E. Azygos vein.

ANSWER: D

5. The bifurcation of trachea is found within which part of the mediastinum:

- A. Superior mediastinum.
- B. Inferior anterior mediastinum.
- C. Inferior middle mediastinum.
- D. Inferior posterior mediastinum.

ANSWER: A

6. Which cardiac chamber's surface feature extends farthest to the left of the sternum:

- A. Left atrium.
- B. Left ventricle.
- C. Right atrium.
- D. Right ventricle.

ANSWER: B

7. Regarding the great arteries of the heart including ascending, arch, and descending aorta. Which part of the mediastinum is **NOT** related to them:

- A. Superior mediastinum
- B. Inferior anterior mediastinum
- C. Inferior middle mediastinum
- D. Inferior posterior mediastinum

ANSWER: B

THE HEART CHAMBERS, VALVES, CONDUCTIVE SYSTEM AND INNERVATIONS – FILE 2:

1. Regarding the skeleton of the heart, choose the correct sentence describing it:

- A. The membranous atrio-ventricular septum has a zigzag shape.
- B. The fibrous cornet of aortic valve has a circular shape.
- C. It prevent the changes in the valves boundaries and support the valves and cusps.
- D. Boundaries of the atrio-ventricular valves aren't bounded to the fibrous rings.

ANSWER: C

2. Which of the following is NOT correct about the right chamber of the heart that pumps blood directly to the pulmonary trunk:

- A. It has 2 openings.
- B. It has a moderator band.
- C. Its lumen has a circular shape.
- D. It has 3 papillary muscles bounded to the chordae tendineae.

ANSWER: C

3. Which of the following openings or landmarks is not present in the left atrium:

- A. Fossa ovalis.
- B. Coronary sinus.
- C. Pulmonary veins openings.
- D. Mitral valve opening.
- E. Bicuspid valve opening.

ANSWER: B

4. Which cusps of the following is unrelated to the pulmonary valve:

- A. Left cusp.
- B. Right cusp.
- C. Anterior cusp.
- D. Posterior cusp.

ANSWER: D

5. Regarding the afferent fibers that come from the cardiac plexus, choose the CORRECT match of the following:

- A. Sympathetic – referral pain, WHILE parasympathetic – reflexes.
- B. Parasympathetic – referral pain, WHILE sympathetic – reflexes.
- C. BOTH Parasympathetic and sympathetic – reflexes.
- D. BOTH Sympathetic and parasympathetic - referral pain.

ANSWER: A

6. A patient came to the ER experiencing tightness in the chest, sweating, and **pain in the left arm's inner side**. An ECG revealed abnormal signs and also sinus tachycardia. The **type of cardiac nerve** that is responsible to this pain and which **segment of the spinal cord** did this nerve enter to evoke this **sensation**:

- A. Parasympathetic fibers - intercostobrachial nerves, T1-T4.
- B. Sympathetic fibers - intercostobrachial nerves, T1-T4.
- C. Parasympathetic fibers - intercostobrachial nerves, T7-T9.
- D. Sympathetic fibers - intercostobrachial nerves, T7-T9.
- E. Sympathetic fibers - intercostobrachial nerves, T1-T6.

ANSWER: B

SURFACE ANATOMY OF THE CVS – FILE 3:

1. One of the following landmarks is **NOT** typically used clinically on the thoracic wall:

- A. Sternal angle (T4/T5) Landmark for 2nd costal cartilage.
- B. Xiphoid process Landmark for the lungs.
- C. Xiphisternal joint Landmark for the diaphragm.
- D. Ribs & Intercostal spaces landmarks for the thoracic viscera in general.

ANSWER: B

2. Which valve found behind the sternum opposite to the 4th intercostal space:

- A. Aortic valve.
- B. Pulmonary valve.
- C. Tricuspid valve.
- D. Mitral valve.

ANSWER: C

3. At which of the following points is the apex of the heart typically located:

- A. IRP - superior border of the 3rd right costal cartilage.
- B. ILP - inferior border of the 2nd left costal cartilage 3cm to the left of midline.
- C. IRP - superior border of the 6th right costal cartilage, 3 cm from the midline.
- D. ILP - 5th intercostal space, 9 cm from the midline (at midclavicular line).

ANSWER: D

4. When you feel the spinous process of T5, at which vertebral body are you:

- A. T4.
- B. T5.
- C. T6.
- D. T3.

ANSWER: C

5. At what vertebral body level does the aortic hiatus in the diaphragm occur/open:

- A. T11.
- B. Spine of T10.
- C. Spine of T9.
- D. T10.
- E. Spine of T11.

ANSWER: E, **The spine extends downward posteriorly, leading to the subsequent vertebral body, which in this case is T12.**

CORONARY CIRCULATIONS – FILE 4:

1. Which of the following cardiac veins DIRECTLY empties into the right atrium:

- A. Coronary sinus.
- B. Anterior cardiac vein.
- C. Great cardiac vein.
- D. Small middle cardiac vein.
- E. More than one answer is correct.

ANSWER: E (A+B)

2. Choose the **CORRECT** match:

- A. Anterior cardiac vein - left descending anterior coronary artery.
- B. Middle cardiac vein - right marginal artery.
- C. Great cardiac vein - left descending anterior coronary artery.
- D. Small cardiac vein - posterior interventricular artery.

ANSWER: C

3. Choose the **INCORRECT** option regarding the right coronary artery:

- A. It would give SA. nodal branch in 60% of the individuals.
- B. Its the one that mainly gives the posterior inter-ventricular branch.
- C. It branches off into right diagonal artery.
- D. It connects and merges with the other branches of the left coronary arteries through anastomosis.

ANSWER: C

4. Which of the following branches is **not related** to the circumflex branch of the left coronary artery:

- A. Left marginal artery branch.
- B. Left lateral artery branch.
- C. Anterior ventricular artery branches.
- D. Posterior ventricular artery branches.
- E. Atrial artery branches.

ANSWER: B

5. During the open heart surgery to perform a valve replacement on the patient, upon inspection, you notice ischemic tissue on the **anterior surface** of the heart, along with an included **long branch**. This branch is most likely:

- A. Left coronary artery.
- B. Right coronary artery.
- C. Left anterior descending artery.
- D. Left marginal branch.
- E. Right conus artery.

ANSWER: C

6. From **which branch** does the posterior interventricular artery directly originate from:

- A. Left coronary artery.
- B. Right coronary artery.
- C. Left anterior descending artery.
- D. Right marginal branch.
- E. Right conus artery.

ANSWER: B

MAIN ARTRIES AND VEINS – FILE 5+6:

1. Which of the following arteries/branches is **not found** in the body:

- A. Right brachiocephalic trunk.
- B. Left brachiocephalic trunk.
- C. Right subclavian.
- D. Left subclavian.
- E. Left vertebral.

ANSWER: B

2. Which of the following branches is **not a branch** of **external carotid artery**:

- A. Lingual artery.
- B. Occipital artery.
- C. Inferior thyroid artery.
- D. Maxillary artery.

ANSWER: C

3. Which of the following branches is **a branch of internal carotid artery**:

- A. Superior cerebellar artery.
- B. Posterior cerebral artery.
- C. Anterior cerebral artery.
- D. Basilar artery.

ANSWER: C

4. Anterior cerebral artery + Anterior cerebral artery =

- A. Basilar artery.
- B. Posterior communicating artery.
- C. Anterior communicating artery.
- D. Ophthalmic artery.

ANSWER: C

5. Left vertebral artery + Right vertebral artery =

- A. Pons artery.
- B. Basilar artery.
- C. Posterior cerebral artery.
- D. Anterior spinal artery.

ANSWER: B

6. Which of the following is **an anterior** branch of abdominal aorta:

- A. Renal arteries.
- B. Gonads arteries.
- C. Celiac arteries.
- D. Lumbar arteries.

ANSWER: C

7. What is the correct sequence of the following deep veins starting near the shoulder joint:

- A. Subclavian, brachial, axillary, radial and ulnar.
- B. Subclavian, axillary, brachial, radial and ulnar.
- C. Brachial, subclavian, axillary, radial and ulnar.
- E. Axillary, subclavian, brachial, radial and ulnar.

ANSWER: B

8. Which of the following statements is correct regarding the superficial veins of the upper limb:

- A. The basilic vein is located laterally.
- B. The cephalic vein is located medially.
- C. The vein of choice for vein catheterization is the cephalic vein.
- D. Median vein of the forearm is one of the sites of venipuncture.
- E. Basilic vein united with the brachial vein to form axillary vein.

ANSWER: E

HISTOLOGY OF THE HEART – FILE 7:

1. The main difference between a big vein and an artery is that with the same cross section area and lumen:

A. The artery thickest tunica is the tunica media, while the vein thickest tunica is the tunica externa.

B. The artery thickest tunica is the tunica media, also the vein thickest tunica is the tunica media.

C. The artery thickest tunica is the tunica interna, while the vein thickest tunica is the tunica externa.

D. The artery thickest tunica is the tunica externa, also the vein thickest tunica is the tunica externa.

E. Both the artery and vein have the same thickness of tunica media.

ANSWER: A

2. Which of the following is not related to the fenestrated capillaries:

A. They have pores.

B. They are found in jejunum mucosa.

C. Their basement membrane is discontinuous.

D. Each fenestra is obliterated by a diaphragm.

ANSWER: C

3. The majority of blood vessels got which of the following characteristic:

- A. Their basal lamina is discontinuous.
- B. Macrophages are located among or outside of the endothelium.
- C. Their basal lamina and endothelial cells are continuous.
- D. Their endothelial cells got big fenestrations.

ANSWER: C

4. Small veins got how many layers of tunica media:

- A. 1 layer of concentric smooth muscle cells.
- B. 2-3 layers of concentric smooth muscle cells.
- C. 5-10 layers of concentric smooth muscle cells.
- D. 20 layers of concentric smooth muscle cells.
- E. 20+ layers of concentric smooth muscle cells.

ANSWER: B

5. In comparison of veins to arteries:

- A. Arteries have a larger lumen to wall ratio.
- B. Veins have less smooth muscle but more elastic tissue.
- C. Veins usually display an irregular lumen in fixed tissue.
- D. The three layers of arteries are not always easily distinguished.

ANSWER: C

6. Which of the following conductive cells within the heart has the greatest diameter:

- A. SA. node cells.
- B. AV. node cells.
- C. AV. bundle cells.
- D. Purkinje fibers.

ANSWER: D

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