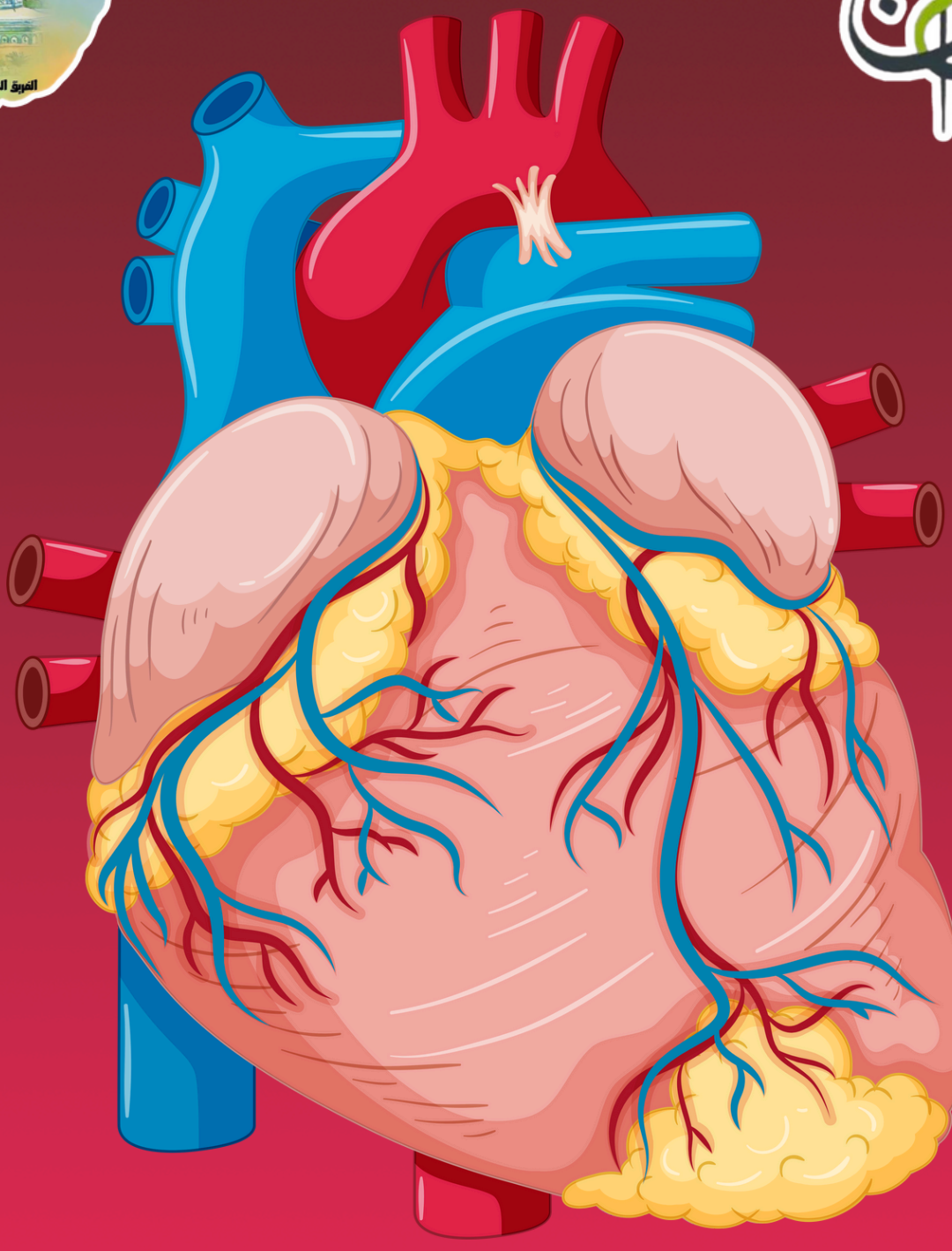
ANATOMY - TEST BANK

CVS



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Mediastinum

1. **Which veins are the only veins that carry oxygenated blood?**
    - **A) Pulmonary veins**
    - **B) Superior vena cava**
    - **C) Inferior vena cava**
    - **D) Jugular veins**
    - **Answer: A**
2. **What is the function of the sternal angle?**
    - **A) It is a site for bone marrow biopsy**
    - **B) It helps in counting the ribs**
    - **C) It supports the lungs**
    - **D) It connects the ribs to the sternum**
    - **Answer: B**
3. **Which artery is a branch of the first part of the subclavian artery?**
    - **A) Internal thoracic (mammary) artery**
    - **B) Superior epigastric artery**
    - **C) Musculophrenic artery**
    - **D) Superior intercostal artery**
    - **Answer: A**
4. **What is the route of early metastasis of carcinoma from the lung, breast, and prostate gland to bones and the central nervous system (CNS)?**
    - **A) Azygos vein**
    - **B) Pulmonary veins**
    - **C) Superior vena cava**
    - **D) Vertebral venous plexus**
    - **Answer: D**
5. **What is the superior boundary of the mediastinum?**
    - **A) Thoracic inlet**
    - **B) Diaphragm**

- **C) Sternum**
- **D) Vertebral column**
- **Answer: A**

6. **What is the posterior boundary of the mediastinum?**
    - **A) Thoracic inlet**
    - **B) Sternum**
    - **C) Diaphragm**
    - **D) Vertebral column**
    - **Answer: D**
7. **What is the function of the fibrous pericardium?**
    - **A) Protects the heart against sudden overfill**
    - **B) Pumps blood**
    - **C) Produces hormones**
    - **D) Regulates body temperature**
    - **Answer: A**
8. **What is the main blood supply to the pericardium?**
    - **A) Musculophrenic artery**
    - **B) Pericardiacophrenic artery**
    - **C) Bronchial arteries**
    - **D) Coronary arteries**
    - **Answer: B**
9. **Which nerve supplies the fibrous pericardium and the parietal layer of the serous pericardium?**
    - **A) Sympathetic trunks**
    - **B) Vagus nerves**
    - **C) Phrenic nerves (C3–C5)**
    - **D) Intercostal nerves**
    - **Answer: C**
10. **What is the main function of the azygos vein?**

- **A) It is a direct link between the superior vena cava (SVC) and inferior vena cava (IVC)**
- **B) It carries oxygenated blood**
- **C) It produces hormones**
- **D) It regulates body temperature**
- **Answer: A**

11. **What is the function of the superior vena cava (SVC)?**
    - **A) It pumps blood**
    - **B) It receives the venous return from the upper half of the body, above the diaphragm**
    - **C) It produces hormones**
    - **D) It regulates body temperature**
    - **Answer: B**
12. **What is the function of the pulmonary veins?**
    - **A) They carry oxygenated blood from the lungs to the left atrium**
    - **B) They carry deoxygenated blood**
    - **C) They produce hormones**
    - **D) They regulate body temperature**
    - **Answer: A**
13. **What is the function of the aorta?**
    - **A) It carries oxygenated blood from the left ventricle to the body**
    - **B) It carries deoxygenated blood**
    - **C) It produces hormones**
    - **D) It regulates body temperature**
    - **Answer: A**
14. **What is the function of the coronary arteries?**
    - **A) They produce hormones**
    - **B) They carry deoxygenated blood**
    - **C) They supply blood to the heart muscle**
    - **D) They regulate body temperature**
    - **Answer: C**

15. **What is the function of the coronary veins?**
    - **A) They return deoxygenated blood from the heart muscle to the right atrium**
    - **B) They carry oxygenated blood**
    - **C) They produce hormones**
    - **D) They regulate body temperature**
    - **Answer: A**
16. **What is the function of the aortic valve?**
    - **A) It prevents backflow of blood from the aorta to the left ventricle**
    - **B) It prevents backflow of blood from the left ventricle to the left atrium**
    - **C) It prevents backflow of blood from the right ventricle to the right atrium**
    - **D) It prevents backflow of blood from the pulmonary artery to the right ventricle**
    - **Answer: A**
17. **What is the function of the right atrium?**
    - **A) It regulates body temperature**
    - **B) It pumps blood to the body**
    - **C) It produces hormones**
    - **D) It receives deoxygenated blood from the body**
    - **Answer: D**

29. **What is the function of the Purkinje fibers?**
    - **A) They conduct the electrical impulse to the ventricular muscle, causing it to contract**
    - **B) They generate the electrical impulse that initiates the heartbeat**
    - **C) They delay the electrical impulse to allow the atria to contract before the ventricles**
    - **D) They regulate the heart rate**
    - **Answer: A**
30. **What is the function of the coronary sinus?**
    - **A) It collects deoxygenated blood from the heart muscle and returns it to the right atrium**
    - **B) It carries oxygenated blood to the heart muscle**
    - **C) It produces hormones**

- **D) It regulates body temperature**
- **Answer: A**

31. What is the function of the Eustachian valve?

- **A) It prevents backflow of blood from the right ventricle to the right atrium**
- **B) It directs blood flow from the inferior vena cava to the right atrium**
- **C) It prevents backflow of blood from the left ventricle to the left atrium**
- **D) It prevents backflow of blood from the pulmonary artery to the right ventricle**
- **Answer: B**

32. What is the function of the Thebesian valve?

- **A) It prevents backflow of blood from the left ventricle to the left atrium**
- **B) It prevents backflow of blood from the right ventricle to the right atrium**
- **C) It prevents backflow of blood from the coronary sinus to the right atrium**
- **D) It prevents backflow of blood from the pulmonary artery to the right ventricle**
- **Answer: C**

33. What is the function of the crista terminalis?

- **A) It separates the smooth and rough parts of the right atrium**
- **B) It separates the right and left atria**
- **C) It separates the atria from the ventricles**
- **D) It separates the pulmonary and systemic circulation**
- **Answer: A**

34. What is the function of the papillary muscles?

- **A) They prevent the inversion of the AV valves during ventricular contraction**
- **B) They generate the electrical impulse that initiates the heartbeat**
- **C) They delay the electrical impulse to allow the atria to contract before the ventricles**
- **D) They regulate the heart rate**
- **Answer: A**

35. What is the function of the chordae tendineae?

- **A) They connect the papillary muscles to the AV valve cusps**
- **B) They generate the electrical impulse that initiates the heartbeat**

- **C) They delay the electrical impulse to allow the atria to contract before the ventricles**
- **D) They regulate the heart rate**
- **Answer: A**

36. What is the function of the conus arteriosus?

- **A) It is the rough inflow part of the left ventricle**
- **B) It is the smooth outflow part of the left ventricle leading to the aorta**
- **C) It is the rough inflow part of the right ventricle**
- **D) It is the smooth outflow part of the right ventricle leading to the pulmonary trunk**
- **Answer: D**

37. What is the function of the supraventricular crest?

- **A) It separates the inflow and outflow parts of the right ventricle**
- **B) It separates the right and left ventricles**
- **C) It separates the atria from the ventricles**
- **D) It separates the pulmonary and systemic circulation**
- **Answer: A**

38. What is the function of the septomarginal trabecula (moderator band)?

- **A) It carries part of the right branch of the AV bundle to the anterior papillary muscle**
- **B) It separates the right and left ventricles**
- **C) It separates the atria from the ventricles**
- **D) It separates the pulmonary and systemic circulation**
- **Answer: A**

39. What is the function of the pericardial cavity?

- **A) It contains a thin film of fluid that acts as a lubricant for movements of the heart**
- **B) It produces hormones**
- **C) It regulates body temperature**
- **D) It pumps blood**
- **Answer: A**

40. Which of the following is a structure that is found in superior and middle mediastinum?

A. Aortic arch

B. Vagus nerve

C. Phrenic nerve

D. Thymus

Answer: C

41 Which of the following is false?

A) At the left sternoclavicular (SC) joint, the brachiocephalic trunk divides into the left common carotid and left subclavian arteries.

B) The right brachiocephalic trunk divides into the right common carotid and right subclavian arteries.

C) The brachiocephalic trunk is a direct branch of the aortic arch on the right side.

D) The left common carotid artery arises directly from the aortic arch.

Answer: A

42 Which of the following nerves pass on the right (posterior) side and inferior to the arch of the aorta?

A. Left phrenic nerve
B. Left vagus
C. Right recurrent laryngeal nerve
D. Left recurrent laryngeal nerve
E. Right vagus
Answer: D

43 Which one of the following is not true about the right and left brachiocephalic veins?

A. Both found in the superior mediastinum
B. The left one is longer and oblique
C. Both begin behind the medial end of the clavicle
D. Both receive vertebral and superior intercostal veins

Answer: D

44 What event doesn't occur at the level of the imaginary line?

A) Beginning and ending of the aortic arch
B) Beginning of the descending aorta
C) Formation of the superior vena cava (SVC)
D) Bifurcation of the trachea

Answer: C

45 Inferior and posterior to the arch of the aorta:

A. Phrenic nerve

B. Left recurrent laryngeal nerve

C. Pulmonary trunk

Answer: B

Middle mediastinum and pericardium:

1. **What does the middle mediastinum contain?**
    - A) Lungs
    - B) Pericardial sac
    - C) Liver
    - D) Kidneys
    - **Answer:** B
2. **What are the two layers of the pericardium?**
    - A) Fibrous and serous
    - B) Muscular and fibrous
    - C) Serous and muscular
    - D) Fibrous and muscular
    - **Answer:** A
3. **What is the outer tough layer of the pericardium called?**
    - A) Serous pericardium
    - B) Fibrous pericardium
    - C) Muscular pericardium
    - D) Adventitia
    - **Answer:** B
4. **What is the space between the two layers of the serous pericardium called?**
    - A) Peritoneal cavity
    - B) Pleural cavity

- C) Pericardial cavity
- D) Synovial cavity
- **Answer:** C

5. **What is the function of the fluid in the pericardial cavity?**
    - A) Acts as a lubricant for movements of the heart
    - B) Pumps blood
    - C) Produces hormones
    - D) Regulates body temperature
    - **Answer:** A
6. **What are the boundaries of the transverse sinus?**
    - A) Anterior: Ascending aorta and pulmonary trunk; Posterior: SVC; Inferior: Atria of the heart
    - B) Anterior: Sternum; Posterior: Vertebral column; Inferior: Diaphragm
    - C) Anterior: Lungs; Posterior: Heart; Inferior: Liver
    - D) Anterior: Ribs; Posterior: Spine; Inferior: Stomach
    - **Answer:** A
7. **What are the boundaries of the oblique sinus?**
    - A) Anterior: Ribs; Posterior: Spine; Inferior: Stomach B) Anterior: Sternum; Posterior: Vertebral column; Inferior: Diaphragm
    - C) Anterior: Lungs; Posterior: Heart; Inferior: Liver
    - D) Anterior: Visceral pericardium covering back of left atrium; Posterior: Parietal pericardium covering esophagus.
    - **Answer:** D
8. **Which veins drain the pericardium?**
    - A) Pericardiacophrenic veins
    - B) Jugular veins
    - C) Pulmonary veins
    - D) Coronary veins
    - **Answer:** A
9. **Which nerves supply the fibrous pericardium and the parietal layer of the serous pericardium?**

- A) Sympathetic trunks
- B) Vagus nerves
- C) Phrenic nerves (C3–C5)
- D) Intercostal nerves
- **Answer:** C

10. **Which nerves innervate the visceral layer of the serous pericardium?**
    - A) Branches of the sympathetic trunks and the vagus nerves
    - B) Phrenic nerves (C3–C5)
    - C) Intercostal nerves
    - D) Cranial nerves
    - **Answer:** A
11. **Where is pericardial pain referred to?**
    - A) Skin of the ipsilateral supraclavicular region, top of the shoulder of the same side (C3–C5 dermatomes)
    - B) Lower back
    - C) Abdomen
    - D) Legs
    - **Answer:** A
12. **Where does pericarditis pain usually occur?**
    - A) Behind the breastbone (sternum) or on the left side of the chest
    - B) Lower back
    - C) Abdomen
    - D) Legs
    - **Answer:** A
13. **What is pericardial effusion?**
    - A) Decrease in fluid between the parietal and visceral layers of the pericardium
    - B) Increase in fluid between the parietal and visceral layers of the pericardium
    - C) Increase in air between the parietal and visceral layers of the pericardium
    - D) Decrease in air between the parietal and visceral layers of the pericardium

- **Answer:** B

14. **What is cardiac tamponade?**
    - A) Rapid accumulation of excess fluid within the pericardial sac, leading to compression of the heart and heart failure
    - B) Slow accumulation of fluid within the pericardial sac
    - C) Rapid accumulation of air within the pericardial sac
    - D) Slow accumulation of air within the pericardial sac
    - **Answer:** A
15. **How is pericardial effusion usually removed?**
    - A) By inserting a needle in the right 5th or 6th intercostal spaces close to the sternum
    - B) By inserting a needle in the left 5th or 6th intercostal spaces close to the sternum
    - C) By inserting a needle in the left 7th or 8th intercostal spaces close to the sternum
    - D) By inserting a needle in the left 5th or 6th intercostal spaces away from the sternum
      Answer: B
16. **What is the fibrous pericardium attached to superiorly?**
    - A) Tunica adventitia of the great vessels
    - B) Central tendon of the diaphragm
    - C) Posterior surface of the sternum
    - D) Loose connective tissue in the posterior mediastinum
    - **Answer:** A
17. **What is the fibrous pericardium attached to inferiorly?**
    - A) Central tendon of the diaphragm (pericardiacophrenic ligament)
    - B) Tunica adventitia of the great vessels
    - C) Posterior surface of the sternum
    - D) Loose connective tissue in the posterior mediastinum
    - **Answer:** A

Internal morphology:

1. **Which chambers of the heart are responsible for receiving blood?**

- **A) Right and left atria**
- **B) Right and left ventricles**
- **C) Right atrium and left ventricle**
- **D) Right ventricle and left atrium**
- **Answer: A**

2. **What is the function of the right auricle?**
    - **A) Increases the capacity of the right ventricle**
    - **B) Increases the capacity of the left atrium**
    - **C) Increases the capacity of the right atrium**
    - **D) Increases the capacity of the left ventricle**
    - **Answer: C**
3. **What separates the smooth and rough parts of the right atrium externally?**
    - **A) Sulcus terminalis**
    - **B) Crista terminalis**
    - **C) Fossa ovalis**
    - **D) Annulus ovalis**
    - **Answer: A**
4. **What separates the smooth and rough parts of the right atrium internally?**
    - **A) Sulcus terminalis**
    - **B) Crista terminalis**
    - **C) Fossa ovalis**
    - **D) Annulus ovalis**
    - **Answer: B**
5. **What is the oval depression in the interatrial septum called?**
    - **A) Sulcus terminalis**
    - **B) Crista terminalis**
    - **C) Fossa ovalis**
    - **D) Annulus ovalis**
    - **Answer: C**

6. **What is the remnant of the fetal foramen ovale called?**
    - **A) Sulcus terminalis**
    - **B) Crista terminalis**
    - **C) Fossa ovalis**
    - **D) Annulus ovalis**
    - **Answer: C**
7. **What is the smooth outflow part of the right ventricle called?**
    - **A) Conus arteriosus**
    - **B) Trabeculae carneae**
    - **C) Supraventricular crest**
    - **D) Papillary muscles**
    - **Answer: A**
8. **What are the muscular irregular structures in the right ventricle called?**
    - **A) Conus arteriosus**
    - **B) Trabeculae carneae**
    - **C) Supraventricular crest**
    - **D) Papillary muscles**
    - **Answer: B**
9. **What separates the inflow and outflow parts of the right ventricle?**
    - **A) Conus arteriosus**
    - **B) Trabeculae carneae**
    - **C) Supraventricular crest**
    - **D) Papillary muscles**
    - **Answer: C**
10. **What are the tendinous cords attached to the papillary muscles called?**
    - **A) Chordae tendineae**
    - **B) Trabeculae carneae**
    - **C) Supraventricular crest**
    - **D) Conus arteriosus**

- **Answer: A**

11. **How many papillary muscles are there in the right ventricle?**
    - **A) 1**
    - **B) 2**
    - **C) 3**
    - **D) 4**
    - **Answer: C**
12. **Which papillary muscle in the right ventricle is the largest and most prominent?**
    - **A) Anterior papillary muscle**
    - **B) Posterior papillary muscle**
    - **C) Septal papillary muscle**
    - **D) Lateral papillary muscle**
    - **Answer: A**
13. **Which papillary muscle in the right ventricle arises from the inferior wall?**
    - **A) Anterior papillary muscle**
    - **B) Posterior papillary muscle**
    - **C) Septal papillary muscle**
    - **D) Lateral papillary muscle**
    - **Answer: B**
14. **What is the curved muscular bundle in the right ventricle called?**
    - **A) Septomarginal trabecula (moderator band)**
    - **B) Trabeculae carneae**
    - **C) Supraventricular crest**
    - **D) Conus arteriosus**
    - **Answer: A**
15. **What is the function of the septomarginal trabecula (moderator band)?**
    - **A) Separates the pulmonary and systemic circulation**
    - **B) Separates the right and left ventricles**
    - **C) Separates the atria from the ventricles**

- **D) Carries part of the right branch of the AV bundle to the anterior papillary muscle**
- **Answer: D**

16. **What is the interventricular septum composed of?**
    - **A) Muscular and membranous parts**
    - **B) Muscular and fibrous parts**
    - **C) Membranous and fibrous parts**
    - **D) Muscular and cartilaginous parts**
    - **Answer: A**
17. **What forms most of the base of the heart?**
    - **A) Left atrium**
    - **B) Right atrium**
    - **C) Left ventricle**
    - **D) Right ventricle**
    - **Answer: A**
18. **What separates the left atrium from the esophagus?**
    - **A) Fibrous pericardium**
    - **B) Muscular pericardium**
    - **C) Serous pericardium**
    - **D) Adventitia**
    - **Answer: A**

External morphology of the heart:

1. **Which structure is primarily responsible for anchoring the cardiac muscle fibers and maintaining the integrity of the heart's shape?**
    - **A. Pericardium**
    - **B. Fibrous skeleton**
    - **C. Myocardium**
    - **D. Endocardium**
    - **Answer: B. Fibrous skeleton**

2. **The right fibrous trigone of the heart serves as a connective tissue between which structures?**
    - **A. Aortic ring and pulmonary ring**
    - **B. Right atrioventricular ring and left atrioventricular ring**
    - **C. Aortic ring and right atrioventricular ring**
    - **D. Pulmonary ring and left atrioventricular ring**
    - **Answer: C. Aortic ring and right atrioventricular ring**
3. **Which of the following structures is NOT found in the coronary sulcus?**
    - **A. Right coronary artery**
    - **B. Circumflex branch of the left coronary artery**
    - **C. Anterior interventricular artery**
    - **D. Coronary sinus**
    - **Answer: C. Anterior interventricular artery**
4. **The posterior interventricular groove contains which of the following structures?**
    - **A. Great cardiac vein**
    - **B. Middle cardiac vein**
    - **C. Small cardiac vein**
    - **D. Anterior cardiac vein**
    - **Answer: B. Middle cardiac vein**
5. **Which layer of the heart is directly continuous with the visceral layer of the serous pericardium?**
    - **A. Endocardium**
    - **B. Myocardium**
    - **C. Epicardium**
    - **D. Fibrous pericardium**
    - **Answer: C. Epicardium**
6. **The base of the heart is separated from the vertebrae by all of the following structures EXCEPT:**
    - **A. Pericardium**
    - **B. Oblique pericardial sinus**

- **C. Esophagus**
- **D. Trachea**
- **Answer: D. Trachea**

7. **Which of the following statements about the cardiac cycle is correct?**
   - **A. The first heart sound (lub) is produced by the opening of the atrioventricular valves.**
   - **B. The second heart sound (dub) is produced by the closing of the semilunar valves.**
   - **C. Diastole refers to the period of ventricular shortening and emptying.**
   - **D. Systole refers to the period of ventricular elongation and filling.**
   - **Answer: B. The second heart sound (dub) is produced by the closing of the semilunar valves.**
8. **Which structure forms the majority of the diaphragmatic surface of the heart?**
   - **A. Right atrium**
   - **B. Left atrium**
   - **C. Right ventricle**
   - **D. Left ventricle**
   - **Answer: D. Left ventricle**
9. **The right border of the heart extends between which two structures?**
   - **A. Superior vena cava and inferior vena cava**
   - **B. Right atrium and right ventricle**
   - **C. Left atrium and left ventricle**
   - **D. Pulmonary trunk and aorta**
   - **Answer: A. Superior vena cava and inferior vena cava**
10. **Which of the following structures is NOT part of the fibrous skeleton of the heart?**
    - **A. Fibrous rings surrounding the valve orifices**
    - **B. Fibrous trigone**
    - **C. Membranous parts of the interatrial and interventricular septa**
    - **D. Chordae tendineae**
    - **Answer: D. Chordae tendineae**
11. **The apex of the heart is located in which intercostal space?**

- **A. 3rd**
- **B. 4th**
- **C. 5th**
- **D. 6th**
- **Answer: C. 5th**

12. **Which structure is primarily responsible for preventing the backflow of blood into the left ventricle during diastole?**
    - **A. Mitral valve**
    - **B. Tricuspid valve**
    - **C. Aortic valve**
    - **D. Pulmonary valve**
    - **Answer: C. Aortic valve**
13. **The anterior interventricular artery is a branch of which coronary artery?**
    - **A. Right coronary artery**
    - **B. Left coronary artery**
    - **C. Circumflex artery**
    - **D. Posterior interventricular artery**
    - **Answer: B. Left coronary artery**
14. **Which of the following structures is NOT involved in the formation of the heart's right border?**
    - **A. Right atrium**
    - **B. Superior vena cava**
    - **C. Inferior vena cava**
    - **D. Left atrium**
    - **Answer: D. Left atrium**
15. **The left atrium contributes to which of the following surfaces of the heart?**
    - **A. Anterior (sternocostal) surface**
    - **B. Diaphragmatic (inferior) surface**
    - **C. Right surface**
    - **D. Base**

- **Answer: D. Base**

16. **Which structure is found in the anterior interventricular groove?**
    - **A. Right coronary artery**
    - **B. Circumflex artery**
    - **C. Anterior interventricular artery**
    - **D. Posterior interventricular artery**
    - **Answer: C. Anterior interventricular artery**
17. **Which structure is primarily responsible for the electrical insulation between the atria and ventricles?**
    - **A. Myocardium**
    - **B. Endocardium**
    - **C. Epicardium**
    - **D. Fibrous skeleton**
    - **Answer: D. Fibrous skeleton**
18. **The left border of the heart is formed mainly by which structure?**
    - **A. Right atrium**
    - **B. Left atrium**
    - **C. Right ventricle**
    - **D. Left ventricle**
    - **Answer: D. Left ventricle**
19. **Which structure is located in the coronary sulcus and is responsible for draining blood from the myocardium into the right atrium?**
    - **A. Great cardiac vein**
    - **B. Small cardiac vein**
    - **C. Middle cardiac vein**
    - **D. Coronary sinus**
    - **Answer: D. Coronary sinus**

Blood supply of the heart:

1. **Which of the following structures is responsible for preventing the tricuspid valve from prolapsing into the right atrium during ventricular contraction?**
    a. **A. Chordae tendineae**
    b. **B. Papillary muscles**
    c. **C. Fibrous ring**
    d. **D. Valve commissures**
    e. **Answer: B. Papillary muscles**
2. **The mitral valve is located between which two chambers of the heart?**
    a. **A. Right atrium and right ventricle**
    b. **B. Left atrium and left ventricle**
    c. **C. Right ventricle and pulmonary artery**
    d. **D. Left ventricle and aorta**
    e. **Answer: B. Left atrium and left ventricle**
3. **Which valve is most likely to be affected by rheumatic fever, leading to valvulitis and subsequent stenosis?**
    a. **A. Tricuspid valve**
    b. **B. Pulmonary valve**
    c. **C. Mitral valve**
    d. **D. Aortic valve**
    e. **Answer: C. Mitral valve**
4. **Which coronary artery supplies the majority of the interventricular septum?**
    a. **A. Right coronary artery**
    b. **B. Left coronary artery**
    c. **C. Circumflex artery**
    d. **D. Posterior interventricular artery**
    e. **Answer: B. Left coronary artery**
5. **The nodules of Arantius are found in which type of heart valve?**
    a. **A. Atrioventricular valves**
    b. **B. Semilunar valves**

c. **C. Tricuspid valve**

d. **D. Mitral valve**

e. **Answer: B. Semilunar valves**

6. **Which of the following is NOT a component of the tricuspid valve?**

   a. **A. Anterior cusp**

   b. **B. Posterior cusp**

   c. **C. Septal cusp**

   d. **D. Lateral cusp**

   e. **Answer: D. Lateral cusp**

7. **Which artery is most commonly involved in supplying the sinoatrial (SA) node?**

   a. **A. Right coronary artery**

   b. **B. Left coronary artery**

   c. **C. Circumflex artery**

   d. **D. Anterior interventricular artery**

   e. **Answer: A. Right coronary artery**

8. **Which of the following statements about the chordae tendineae is correct?**

   a. **A. They attach to the atrial surfaces of the valve leaflets.**

   b. **B. They prevent the valve leaflets from everting into the atria.**

   c. **C. They are composed of smooth muscle fibers.**

   d. **D. They are found only in the semilunar valves.**

   e. **Answer: B. They prevent the valve leaflets from everting into the atria.**

9. **Which valve is located between the right ventricle and the pulmonary artery?**

   a. **A. Tricuspid valve**

   b. **B. Mitral valve**

   c. **C. Pulmonary valve**

   d. **D. Aortic valve**

   e. **Answer: C. Pulmonary valve**

10. **Which coronary artery is responsible for supplying the AV node in most individuals?**

    a. **A. Right coronary artery**

b. **B. Left coronary artery**

c. **C. Circumflex artery**

d. **D. Anterior interventricular artery**

e. **Answer: A. Right coronary artery**

11. **Which of the following conditions is characterized by the thickening and rigidity of heart valves due to inflammation?**

    a. **A. Valvulitis**

    b. **B. Stenosis**

    c. **C. Regurgitation**

    d. **D. Prolapse**

    e. **Answer: A. Valvulitis**

12. **The left anterior descending (LAD) artery is a branch of which coronary artery?**

    a. **A. Right coronary artery**

    b. **B. Left coronary artery**

    c. **C. Circumflex artery**

    d. **D. Posterior interventricular artery**

    e. **Answer: B. Left coronary artery**

13. **Which of the following is true about the blood supply to the heart valves?**

    a. **A. The cusps are highly vascularized.**

    b. **B. Blood vessels are found throughout the entire cusp.**

    c. **C. Small blood vessels are found only at the base of the cusps.**

    d. **D. The valves receive blood supply from the coronary arteries.**

    e. **Answer: C. Small blood vessels are found only at the base of the cusps.**

14. **Which artery supplies the posterior third of the interventricular septum?**

    a. **A. Right coronary artery**

    b. **B. Left coronary artery**

    c. **C. Circumflex artery**

    d. **D. Posterior interventricular artery**

    e. **Answer: D. Posterior interventricular artery**

15. **Which of the following is a function of the fibrous rings of the heart valves?**
    a. **A. They prevent the valves from everting.**
    b. **B. They provide attachment for the valve cusps.**
    c. **C. They are involved in the conduction of electrical impulses.**
    d. **D. They supply blood to the valve cusps.**
    e. **Answer: B. They provide attachment for the valve cusps.**
16. **Which of the following is true about the semilunar valves?**
    a. **A. They have two cusps.**
    b. **B. They are located between the atria and ventricles.**
    c. **C. They prevent backflow of blood into the ventricles.**
    d. **D. They are supported by chordae tendineae.**
    e. **Answer: C. They prevent backflow of blood into the ventricles.**

Which of the following statements accurately describes the blood supply to the interventricular septum?

A. The entire interventricular septum is supplied by the right coronary artery.

B. The anterior two-thirds of the interventricular septum is supplied by the left coronary artery.

C. The posterior one-third of the interventricular septum is supplied by the circumflex artery.

D. The entire interventricular septum is supplied by the left anterior descending artery.

Answer: B. The anterior two-thirds of the interventricular septum is supplied by the left coronary artery.

17. **Which of the following conditions is most likely to result from the inflammation-induced angiogenesis in heart valves due to rheumatic fever?**
    a. **A. Increased elasticity of the valve cusps**
    b. **B. Decreased vascularization of the valve cusps**
    c. **C. Progressive replacement of elastic tissue by collagen fibers**
    d. **D. Enhanced flexibility of the valve cusps**
    e. **Answer: C. Progressive replacement of elastic tissue by collagen fibers**
18. **Which of the following arteries is most likely to be involved in a myocardial infarction affecting the lateral wall of the left ventricle?**

a. **A. Right coronary artery**
b. **B. Left anterior descending artery**
c. **C. Circumflex artery**
d. **D. Posterior interventricular artery**
e. **Answer: C. Circumflex artery**

19. **Which of the following anatomical features prevents the semilunar valves from sticking to the walls of the vessel and ensures their proper closure?**
    a. **A. Chordae tendineae**
    b. **B. Papillary muscles**
    c. **C. Sinuses of Valsalva**
    d. **D. Fibrous ring**
    e. **Answer: C. Sinuses of Valsalva**

Nerve supply and surface anatomy of the heart:

1. **Which of the following structures is NOT part of the cardiac plexus?**
    - **A. Sympathetic fibers**
    - **B. Parasympathetic fibers**
    - **C. Visceral afferent fibers**
    - **D. Somatic efferent fibers**
    - **Answer: D. Somatic efferent fibers**
2. **The preganglionic sympathetic fibers supplying the heart originate from which spinal cord segments?**
    - **A. T1-T4**
    - **B. T1-T6**
    - **C. T2-T5**
    - **D. T5-T9**
    - **Answer: B. T1-T6**

3. **Which nerve is responsible for the parasympathetic innervation of the heart?**
    - **A. Phrenic nerve**
    - **B. Vagus nerve**
    - **C. Glossopharyngeal nerve**
    - **D. Hypoglossal nerve**
    - **Answer: B. Vagus nerve**
4. **Sympathetic stimulation of the heart results in all of the following EXCEPT:**
    - **A. Increased heart rate**
    - **B. Increased force of contraction**
    - **C. Constriction of coronary arteries**
    - **D. Increased impulse conduction**
    - **Answer: C. Constriction of coronary arteries**
5. **Pain from myocardial ischemia is referred to the skin supplied by which spinal nerves?**
    - **A. T1-T4**
    - **B. T2-T5**
    - **C. T5-T9**
    - **D. T7-T9**
    - **Answer: A. T1-T4**
6. **Which of the following is the primary pacemaker of the heart?**
    - **A. Atrioventricular (AV) node**
    - **B. Purkinje fibers**
    - **C. Bundle of His**
    - **D. Sinuatrial (SA) node**
    - **Answer: D. Sinuatrial (SA) node**
7. **The triangle of Koch is an anatomical landmark for locating which structure?**
    - **A. SA node**
    - **B. AV node**
    - **C. Bundle of His**
    - **D. Coronary sinus**

- **Answer: B. AV node**

8. **Which structure is responsible for the delay in impulse conduction between the atria and ventricles?**
    - **A. SA node**
    - **B. AV node**
    - **C. Bundle of His**
    - **D. Purkinje fibers**
    - **Answer: B. AV node**
9. **The intercostobrachial nerve is a branch of which intercostal nerve?**
    - **A. First**
    - **B. Second**
    - **C. Third**
    - **D. Fourth**
    - **Answer: B. Second**
10. **Which of the following structures is NOT involved in the conduction system of the heart?**
    - **A. SA node**
    - **B. AV node**
    - **C. Cardiac plexus**
    - **D. Purkinje fibers**
    - **Answer: C. Cardiac plexus**
11. **Which of the following statements about the sympathetic supply to the heart is TRUE?**
    - **A. Preganglionic fibers relay in the inferior thoracic ganglia**
    - **B. Postganglionic fibers end in the SA and AV nodes**
    - **C. Sympathetic stimulation decreases heart rate**
    - **D. Most adrenergic receptors on coronary blood vessels are alpha-receptors**
    - **Answer: B. Postganglionic fibers end in the SA and AV nodes**
12. **Which of the following is the correct location for auscultating the mitral valve?**
    - **A. Left 2nd intercostal space**
    - **B. Right 2nd intercostal space**

- **C. Apex of the heart**
- **D. Xiphisternal joint**
- **Answer: C. Apex of the heart**

13. **Which nerve communicates with the medial cutaneous nerve of the arm and is distributed to the skin on the medial side of the upper part of the arm?**
    - **A. Phrenic nerve**
    - **B. Vagus nerve**
    - **C. Intercostobrachial nerve**
    - **D. Median nerve**
    - **Answer: C. Intercostobrachial nerve**
14. **Which of the following is NOT a function of the parasympathetic supply to the heart?**
    - **A. Slows heart rate**
    - **B. Reduces force of contraction**
    - **C. Dilates coronary arteries**
    - **D. Constricts coronary arteries**
    - **Answer: C. Dilates coronary arteries**
15. **Which of the following is the correct surface anatomy point for the apex of the heart?**
    - **A. Right 3rd costal cartilage**
    - **B. Left 2nd costal cartilage**
    - **C. Left 5th intercostal space**
    - **D. Right 6th costal cartilage**
    - **Answer: C. Left 5th intercostal space**
16. **Which of the following is the primary effect of sympathetic stimulation on coronary blood vessels?**
    - **A. Constriction**
    - **B. Dilation**
    - **C. No effect**
    - **D. Spasm**
    - **Answer: B. Dilation**

17. Which of the following is NOT a characteristic of the AV bundle (of His)?

- **A. Begins from the AV node**
- **B. Passes through the fibrous skeleton of the heart**
- **C. Divides into right and left bundles**
- **D. Directly stimulates the atrial myocardium**
- **Answer: D. Directly stimulates the atrial myocardium**

18. Which of the following is the correct location for auscultating the tricuspid valve?

- **A. Left 2nd intercostal space**
- **B. Right 2nd intercostal space**
- **C. Apex of the heart**
- **D. Xiphisternal joint**
- **Answer: D. Xiphisternal joint**

THE END

اعلم أي أخيّ / أختي أننا كلّنا على ثغر، و ما الأمّة إلّا أنا و أنتم، فإذا لم يُصلح كلّ واحدٍ منّا نفسه، لن يكون للأمّة نصرٌ ولا صلاح.

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كل التوفيق لكم.