

1. THE HEART

Station 1: External Anatomy of the Heart

References: *Lab Manual, Exercise 28, p. 151, “Wall of the Heart”, p. 154, “External Anatomy,” and Fig. 28.2, p. 153.*
Textbook, p. 562-567, Table 15.1, p. 563, Fig. 15.4, p. 563, Fig. 15.5, p. 564, and Fig. 15.12, p. 569.
Workbook, Complete p. 177, #1 and 179, #3.

- Q1A. Identify the layer of the pericardium that surrounds the heart but is not on its surface.
Q1B. Name the space between the inner and outer layers of the pericardium.
Q2A. Identify the blood vessel. Label the vessel on p. 179 of your workbook and color it green.
Q2B. Identify the chamber. Label the chamber on p. 179 of your workbook and color it orange.
Q3A. Identify the groove. Label the groove on p. 179 of your workbook and color it pink.
Q3B. Identify the chamber. Label the chamber on p. 179 of your workbook and color it yellow.
Q4A. Which letter identifies the blood vessel that carries oxygen-poor blood from the head and neck to the right atrium? Name it. Label the vessel on p. 179 of your workbook and color it blue.
Q4B. Is the blood vessel in Q4A an artery or a vein?
Q5A. Which letter identifies the blood vessels that carry deoxygenated blood to the lungs from the heart? Name them. Label the vessels on p. 179 of your workbook and color them red.
Q5B. Are the blood vessels in Q5A arteries or veins?
Q6A. Which letter identifies the chamber that receives venous return from the pulmonary circulation? Name it. Label the chamber on p. 179 of your workbook and color it purple.
Q6B. Which letter identifies the vessels that carry blood from the lungs to the chamber in Q6A. Name them. Label them on p. 179 in your workbook and color them pink.
Q7A. Which letter identifies the structure that collects deoxygenated blood from the coronary veins? Which chamber does it open into?
Q7B. Which letter identifies the blood vessel that supplies blood to the two coronary arteries? Name it. Label the vessel on p. 179 of your workbook and color it yellow.

Station 2: Internal Anatomy of the Heart

References: *Lab Manual, Exercise 28, p. 151-154 and complete Fig. 28.1, p. 151.*
Textbook, p. 564-567 and Fig. 15.6, p. 565 and 15.9, p. 566.
Workbook, p. 178, #2.

- Q8A—Q12B. Identify and give the function of the labeled structures or areas.
Q13A. Which ventricle has a thinner myocardium laterally?
Q13B. Fill in the blanks in order to trace the path of blood through the heart, beginning and ending with a blood vessel.
Vena Cavae → ? → Rt. Ventricle → ? → Lungs → ? → ? → L. Ventricle → ?

Station 3: Preserved Sheep Heart Anatomy

References: *Lab Manual, Exercise 28, p. 154-155 and Fig. 28.3 and 28.4.*

1. WEAR GLOVES WHEN HANDLING PRESERVED HEARTS.
 2. Locate the structures in bold face on pages 154-155 in your Lab Manual.
 3. Note that the wall of the left ventricle is much thicker than the wall of the right ventricle. This difference will help in the identification of internal structures.
 4. Please use left and right when identifying chambers.
 5. Throw away the used gloves in the designated waste container when you are through.
- Q14A. Identify these “strings.”

- Q14B. Name the muscles that are attached to the “strings”.
- Q15A. Identify the blood vessel.
- Q15B. Identify the chamber.
- Q16A. Identify this layer of the heart wall.
- Q16B. Identify this valve.

Station 4: Cardiac Conduction System

References: *Textbook, p. 573-575.*

Workbook, complete p. 181, #6.

- Q17A. Name the part of the cardiac conduction system that spontaneously depolarizes causing the heart to contract. Label it on p. 181 in your workbook and color it blue.
- Q17B. Name the part of the cardiac conduction system that delays the depolarization wave allowing enough time for the ventricle to fill with blood. Label it on p. 181 of your workbook and color it orange.
- Q18A. Name the structures that are formed from the branching of the common bundle? Label them on p. 181 of your workbook and color them red.
- Q18B. Which part of the cardiac conduction system carries the depolarization wave very fast through the myocardium. Label it on p 181 of your workbook and color it green.

Station 5: ECG

References: *Textbook, p. 576-581.*

Workbook, complete p. 182, #7 and #8.

- Q19A. Which wave or complex on the ECG is recorded when the depolarization wave moves through the atria? Label the wave or complex on p. 182 in your workbook and color it orange.
- Q19B. Which wave or complex on the ECG is recorded when the depolarization wave moves through the ventricles? Label it on p. 182 and color it green.
- Q20A. Which wave or complex on the ECG is recorded when the ventricles repolarize? Label it on p. 182 and color it purple. Which letter on the ECG strip on the lab table represents the time the atria are depolarizing? Which letter on the ECG strip on the lab table represents the time when the ventricles repolarize?
- Q20B. Which letter on the ECG strip on the lab table represents the time the ventricles are in systole? Name this wave. Complete Fig. 11-5 as the directions indicate and turn it in with your lab report.

Q21. **CLINICAL APPLICATION THOUGHT QUESTION.** (Answer at the bottom of your lab report.)

A fifty-five year old male patient has a heart rate of fifty-seven beats per minute. The ECG tracing reaffirms the slow heart rate but shows that the waves are normal. You know that the patient has a familial history of heart disease and he runs nearly every day. Should you or the patient be concerned about his low heart rate? Why or why not? What is this condition called?

Turn in p. 179, p. 181 and p. 182 from your workbook with your lab report.