

Dissection Report: Discussion Question Guide

Respiratory and Endocrine Systems

1. Why is it necessary for the trachea to have rings of cartilage in its walls?
2. What is the purpose of the hormone thyroxine, which is produced by the thyroid gland?
3. Why do the lungs have a large number of blood vessels?
4. Explain what must happen for the lungs to expand, allowing one to inhale.
5. Why is it necessary to close the opening of a puncture wound in the chest?

Circulatory System

1. What is the purpose of the pericardium that surrounds the heart in mammals?
2. Why does the muscular structure of arteries and veins differ?
3. Which arteries sometimes become blocked in a human and are then “bypassed” by using veins from the patient’s legs?
4. What two major veins of the pig’s heart return deoxygenated blood from the body?
5. Why is pulmonary circulation bypassed in the unborn fetal pig, and how is it bypassed?

Digestive System

1. What are the main functions of the liver in mammals?
2. What is the name of the circular stomach muscle that controls the passage of food into the small intestine?
3. What is the purpose of the villi and microvilli of the small intestine? What is the advantage of having this network of projections, rather than simply a smooth tube?
4. What is the primary function of the large intestine?
5. How does the structure of the rugae in the stomach assist with their function? What glands are found between the rugae, and what is their function?

Urogenital System

1. If a mammal drinks a large amount of saltwater, what will happen to its urinary output?
2. Why is there an advantage for female pigs to have long uterine horns and a small uterine body, whereas in humans the arrangement is reversed?
3. Why is it important for the testes in pigs and other mammals to completely descend into the scrotum?
4. Explain the function of the nephrons in the pig kidneys.
5. What is the unique difference between female egg production and male sperm production in mammals?