

Biology 12 Module 3 Study Guide

Part A Multiple Choice 50 marks

- Know the structure, location and function of the digestive, respiratory and circulatory system. Including but not limited to:
 - Liver
 - Small intestine
 - Enzymes
 - blood vessels of the heart
 - lymph nodes
 - red blood cells
 - larynx
 - vocal cords
- What does the chemical digestion of proteins begin with?
- What is the digestive enzyme in saliva?
- What is the function of the pyloric sphincter?
- What is the function of pancreatic juice?
- What does the liver produce?
- Which part of the digestive system has the largest surface area?
- Where is the bacterial infection that inhibits the absorption of water in the digestive system located?
- At what pH are enzymes most effective?
- Which type of blood vessels have thick walls?
- Where is blood velocity the slowest?
- What does the lymphatic system consist of?
- What is plasma made up of?
- What helps maintain osmotic pressure in the blood?
- What is the sequence of structures through which the nerve impulse passes to cause contraction of the heart?
- What is the level of CO₂ in the blood monitored by?
- Which heart structure is not functioning properly if an electrical device is needed to stimulate the atria to contract?
- What causes high blood pressure?
- What causes hypotension?
- What is a controlling factor in increasing breathing rate?
- What is internal respiration?
- Terms to know/understand:
 - Peristalsis
 - Platelet
 - Antigen
 - Hormone
 - Vessels
 - Valves
 - umbilical arteries
 - subclavian artery
 - hepatic portal vein
 - posterior vena cava
 - veins
 - venous duct
 - umbilical vein
 - pulmonary veins

Part B Short Answer 20 marks

1. Explain how the stomach is well-suited to its function
2. State four ways in which the liver is important to the human body
3. Describe three roles of the lymphatic system
4. Four the following structures found in fetal circulation, describe their location within the fetus and their function in circulation.
 - a. Oval opening
 - b. Venous duct
5. Explain why the breathing rate increases when an individual is exercising hard