

Biology Unit Review

Cells

- What are the three components of cell theory
- What is a prokaryotic cell? Eukaryotic?
- Name and list the function of all cell organelles
- Name three major differences between animal and plant cells

Cell Division

- What are the stages of the cell cycle? Cell division?
- Why do cells divide?
- What is the difference between chromatids and chromosomes?
- What do spindle fibres do?
- What are centrioles and what do they do?
- What causes cancer?
- What is the difference between benign and malignant tumours?
- How many mutations does it take to convert a normal cell to a cancerous cell?
- What are carcinogens. List 3.
- What are some ways that we can diagnose cancer?
- Name and describe three treatment forms of cancer.
- What is meant by the term differentiation?
- Define totipotent, multipotent
- List some characteristics of adult stem cells

Organ Systems and Tissues

- What three factors influence cell specialization?
- Define tissue and organ.
- Name and describe four types of human tissue.
- What are the levels of organization within the human body?

Transport

- List the three types of passive transport.
- Describe a hypotonic and hypertonic situation. What happens to the cell in each case?
- What is osmosis and what is its importance to the body?

Digestive System:

- List all sections of the GI Tract. List all accessory organs.
- List the chemical and physical (if there is any) in the mouth, esophagus, stomach, small intestine, large intestine.
- Where does digestion start?
- What is the function of the epiglottis?
- What is the function of the esophagus? How is the esophagus different from the trachea?
- What is the purpose of the small intestine?
- What are villi and why are they present in the small intestine?

- What is the function of the gallbladder?
- What is the function of the liver?
- What is the function of the pancreas?
- What happens in the large intestine?
- What is peristalsis and where does it happen?
- Be able to label a diagram of the digestive system.

Circulatory System

- Which is thick, arteries or veins? Why?
- Which have valves, arteries or veins? Why?
- Why are capillaries so thin?
- List the four components of blood and briefly describe what each of them does.
- What causes the 'lub-dub' sound of the heart?
- Name the four chambers of the heart.
- What is the function of the pulmonary circuit?
- What is the function of the systemic circuit?
- What kind of blood cells do we have? What does each one do?
- Be able to label a diagram of the heart

Respiratory System

- List the structures of the respiratory tract in order.
- What happens to air in the nose/mouth.
- Describe the structure of the trachea. How does this help its function.
- What is the function of the pharynx and larynx.
- What is the difference between bronchi and bronchioles?
- What are alveoli and why are they only one cell thick?
- What happens at the alveoli?
- Label a diagram of the respiratory system.

Plants

- What is the function of the shoot system in the plant? What are its three components?
- What is the function of the root system in plants?
- What are two different types of root systems?
- What are four types of plant tissues? Describe them and their function.
- Define xylem and phloem.