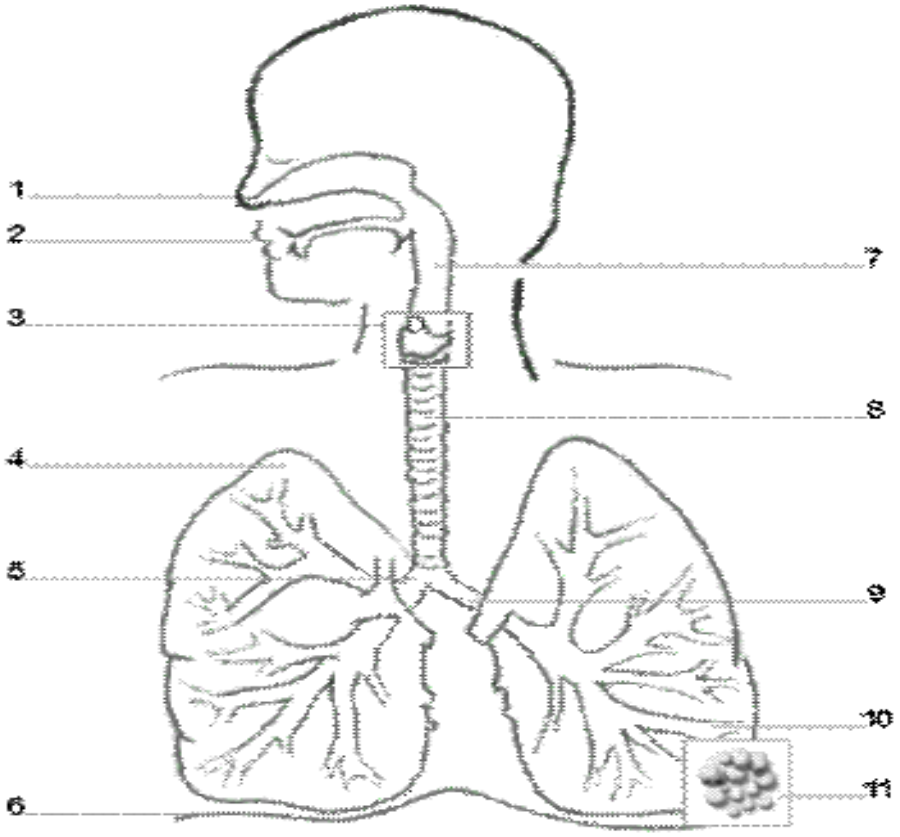
Quiz 3: Living Systems

SNC2DE_2017- 2018_v2 NAME: _____

Part 1: Label the following diagram fully: 5



Part 2: Explain fully, and clearly the following statements. 6

i. Many people assume that gravity helps move food from the mouth to the stomach. Yet astronauts in a completely weightless environment have no trouble eating and drinking. Why?

_____

_____

_____

ii. Many of our systems interact with other systems. Give two example of two systems that must interact and explain this interaction.

_____

_____

_____

iii. Mucus is an important part of the respiratory system. Many cold remedies reduce cold symptoms, including a runny nose, by reducing mucus production. Explain how this kind of medication can put people at risk for a more serious infection.

_____

_____

_____

Part 3: Fill in the blanks: ½ each = 3 marks

i. _____tissue lines the respiratory system and the digestive system.

ii. Oxygen passes from the air in the lungs into the bloodstream by a process known as_____.

iii. _____tissue has the greatest need for oxygen and nutrients.

iii. The blood vessels that surround the small intestine and the air sacs in the lungs are called _____

iv. Most of the water in our food is absorbed in the _____ _____.

v. _____ _____ _____ are specialized blood cells that help our immune system fight off

vi. Bone density scans are used to identify _____ _____.

Part 4:

(a) True or False: State if the following are false or true, if false then correct the statement

5

i. The brain is an example of *muscle* tissue. _____

ii. Bundles of long cells called muscle fibres that contain specialized proteins capable of shortening or contracting are called *muscle* tissue. _____

iii. The *central* nervous system relays information about the internal and external environments to the brain. _____

iv. The shape of the alveoli is designed to maximize *volume* in order to exchange as much gas as possible as the blood passes through. _____

v. The *veins* have thicker walls to compensate for greater blood pressure. _____

(b) Describe the route that a piece of toast takes as it is being digested, explain what happens to it along the way. 2

Part 5: Multiple Choice (10)

1. What does your stomach have that your esophagus does not have that leads to heartburn?

   a. nerve tissue
   b. a thick mucous layer
   c. enzyme-producing cells
   d. epithelial tissue

2. The largest risk associated with organ donation is :

   a. death during surgery
   b. bacterial infection
   c. rejection
   d. all of the above

3. Skeletal muscle is attached to the bones by:

a. Tendons b. Ligaments c. cartilage d. Muscle tissue

4. What is (are) the role(s) of the skeleton?

   a. provide structure for the body
   b. provide support for the body
   c. provide anchor points for muscles
   d. all of the above

5. The epiglottis controls the passage of air into which structure?

a. Pharynx b. Esophagus c. Larynx d. Trachea

6. Which is the correct order of the structures as air passes from the atmosphere to the lungs?

a. Larynx, pharynx, trachea, bronchi, bronchioles, alveoli

b. Pharynx, trachea, larynx, bronchioles, bronchi, alveoli

c. Pharynx, larynx, trachea, bronchi, bronchioles, alveoli

d. Pharynx, larynx, trachea, bronchioles, bronchi, alveoli

e. Trachea, pharynx, larynx, bronchi, bronchioles, alveoli

7. Which of the following sets of terms are organized from least complex to the most complex?

a. organism, cells, organs, tissues, organ system

b. cells, organism, tissues, organs, organ systems

c. cells, organs, organ systems, tissues, organs

d. organism, organ systems, organs, tissues, cells

e. cells, tissues, organs, organ systems, organism

8. An organ is best described as a group of:

a. Similar cells, connected to serve the same purpose

b. different cells, connected to serve the same purpose

c. Similar tissues that work together to serve the same function

d. different tissues that work together to serve the same function

9. Which two systems interact to bring oxygen into an athlete's body and carry it to the muscles?

a. Respiratory and circulatory

b. Respiratory and muscular

c. Excretory and circulatory

d. Excretory and muscular

10. Hemoglobin allows red blood cells to:

a. transport oxygen b. destroy bacteria c. clot d. be transported

Multiple Choice Answers

1	2	3	4	5	6	7	8	9	10