

Section IV – Science – Biology and Chemistry

- 1. Which, if any, of the following statements about the respiratory system are true?**
 - a. The respiratory system consists of all the organs involved in breathing.
 - b. Organs included in the respiratory system are the nose, pharynx, larynx, trachea, bronchi and lungs.
 - c. The respiratory system conveys oxygen into our bodies and removes carbon dioxide from

our bodies.

d. All of the Above.

2. The _____ system maintains the body's balance through the release of _____ directly into the bloodstream.

a. The gastrointestinal system maintains the body's balance through the release of hormones directly into the bloodstream.

b. The endocrine system maintains the body's balance through the release of oxygen directly into the bloodstream.

c. The digestive system maintains the body's balance through the release of hormones directly into the bloodstream.

d. The endocrine system maintains the body's balance through the release of hormones directly into the bloodstream.

3. Among others, the endocrine system includes:

a. The pituitary gland

b. The thyroid gland

c. The adrenal glands

d. All of the Above.

4. _____ are contractile organs that cause movement when stimulated; the three types are _____, _____, and _____.

a. Muscles are expansion organs that cause movement when stimulated; the three types are smooth, cardiac, and skeletal.

b. Muscles are contractile organs that cause movement when stimulated; the three types are smooth, cardiac, and skeletal.

c. Muscles are contractile organs that cause movement when stimulated; the three types are semipermeable, cardiac, and skeletal.

d. Muscles are contractile organs that cause movement when stimulated; the three types are respiratory, cardiac, and skeletal.

5. Which of the following is not a function of the skeletal system?

a. Providing the shape and form of our bodies

b. Supporting and protecting the body

c. Producing Blood

d. Storing vitamins

6. What is the number of bones included in the human skeletal system?

a. 412

b. 103

c. Over 300

d. 206

7. _____ are connected to _____ by _____, and _____ are connected to each other by _____.

- a. Muscles are connected to bones by tendons, and bones are connected to each other by ligaments.
- b. Tendons are connected to bones by ligaments, and bones are connected to each other by tendons.
- c. Muscles are connected to bones by ligaments, and bones are connected to each other by tendons.
- d. Ligaments are connected to bones by tendons, and bones are connected to each other by bands.

8. The _____ consists of all the organs involved in the formation and release of urine and includes the kidneys, ureters, bladder and urethra.

- a. The digestive system consists of all the organs involved in the formation and release of urine and includes the kidneys, ureters, bladder and urethra.
- b. The reproductive system consists of all the organs involved in the formation and release of urine and includes the kidneys, ureters, bladder and urethra.
- c. The renal system consists of all the organs involved in the formation and release of urine and includes the kidneys, ureters, bladder and urethra.
- d. The kidney system consists of all the organs involved in the formation and release of urine and includes the kidneys, ureters, bladder and urethra.

9. _____ is a classification of organisms into different categories based on their physical characteristics and presumed natural relationship.

- a. Biology
- b. Taxonomy
- c. Grouping
- d. Nomenclature

10. The order of the hierarchy of levels in the biological classification of organisms is:

- a. Kingdom, phylum, class, order, family, genus, and species
- b. Phylum, kingdom, class, order, family, genus, and species
- c. Order, phylum, class, kingdom, family, genus, and species
- d. Kingdom, phylum, order, class, family, genus, and species

11. Which, if any, of the following statements about the biosphere are correct?

- a. The biosphere is the part of the Earth that supports life.
- b. The biosphere encompasses the Earth's entire surface.
- c. A and B are correct.
- d. None of these statements are correct.

12. Tundra, savannas, grasslands, deserts and rainforests are examples of _____.

- a. Biomasses
- b. Biospheres
- c. Biodiversity
- d. Biomes

13. The mixture of gases surrounding a planet is its _____.

- a. Atmosphere
- b. Stratosphere
- c. Biosphere
- d. Troposphere

14. In order, from lower to upper, the layers of the atmosphere are:

- a. Exosphere, thermosphere, mesosphere, stratosphere, troposphere
- b. Troposphere, stratosphere, mesosphere, thermosphere, exosphere
- c. Mesosphere, troposphere, stratosphere, , thermosphere, exosphere
- d. Thermosphere, troposphere, stratosphere, mesosphere, , exosphere

15. The force per unit area exerted against a surface by the weight of air above that surface in the Earth's atmosphere is the _____.

- a. Gravitational force
- b. Atmospheric pressure
- c. Barometric density
- d. Aneroid pressure

16. Which, if any, of the following statements are true?

- a. Water boils at approximately 100 °C (212 °F) at standard atmospheric pressure.
- b. The boiling point is the temperature at which the vapor pressure is higher than the atmospheric pressure around the water.
- c. Water boils at a lower temperature in areas of lower pressure.
- d. A and C are true.

17. _____ is the effect of the Earth's rotation on the atmosphere and on all objects on the Earth's surface.

- a. The Coriolis effect
- b. The Corona effect
- c. The Archimedes effect
- d. The tidal effect

18. Binding membrane of an animal cell is called,

- a. Biological membrane
- b. Cell coat
- c. Unit membrane

d. Plasma membrane

19. The segment of a DNA molecule that determines the amino acid sequence of protein is known as ____?

- a. Operator gene
- b. Structural gene
- c. Regulator gene
- d. Modifier gene

20. Cells that line the inner or outer surfaces of organs or body cavities are often linked together by intimate physical connections. These connections are referred to as ____

- a. Separate desmosomes
- b. Ronofilaments
- c. Tight junctions
- d. Fascia adherenes

21. Which one of the following best describes the function of a cell membrane?

- a. It controls the substances entering and leaving the cell.
- b. It keeps the cell in shape.
- c. It controls the substances entering the cell.
- d. It supports the cell structures

22. Which of the following arrangement is seen in the plasma membrane?

- a. Lipids with embedded proteins
- b. An outer lipid layer and an inner lipid layer
- c. Proteins embedded in lipid bilayer
- d. Altering protein and lipid layers

23. Genes control heredity in man and other organisms. This gene is ____

- a. A segment of DNA
- b. A bead like structure on the chromosomes
- c. A protein molecule
- d. A segment of RNA

24. A(an) _____ is a description of a _____ that gives the chemical formulas of the reactants and the _____ of the reaction, with coefficients introduced so that the number of each type of atom and the total charge is _____ by the reaction.

- a. A balanced comparison is a description of a biological reaction that gives the chemical formulas of the reactants and the consequences of the reaction, with coefficients introduced so that the number of each type of atom and the total charge is unchanged by the reaction.
- b. A reactant chemical equation is a description of a chemical reaction that gives the chemical