

Markhor Junior Contest ®

Pioneer Level (Class VII & VIII) Science 2022

There are 25 questions, and each question carries two marks.

1. Which of the following is the first step in the scientific method?
 - a) Testing the hypothesis
 - b) Making observations**
 - c) Drawing conclusions
 - d) Communicating results
2. Which of the following best shows the integration of all STEM fields?
 - a) Writing a storybook
 - b) Designing and testing a self-driving car**
 - c) Painting a picture
 - d) Memorizing multiplication tables
3. Who is credited with building the first compound microscope?
 - a) Galileo Galilei
 - b) Zacharias Janssen**
 - c) Robert Hooke
 - d) Anton van Leeuwenhoek
4. Photosynthesis mainly occurs in which part of a plant cell?
 - a) Mitochondria
 - b) Chloroplasts**
 - c) Nucleus
 - d) Ribosomes
5. What is the basic unit of heredity that carries instructions for traits?
 - a) Chromosome
 - b) Protein
 - c) Gene**
 - d) Ribosome
6. The trait that is expressed when at least one allele is present is:
 - a) Recessive
 - b) Dominant**
 - c) Codominant
 - d) Hidden
7. Cloning produces organisms that are:
 - a) Completely different genetically
 - b) Half like the parent
 - c) Genetically identical to the parent**
 - d) Always larger than the parent

Markhor Junior Contest ®

8. Which of the following is an infectious disease?
- a) Diabetes
 - b) Asthma
 - c) Tuberculosis**
 - d) Cancer
9. The main goal of public health is to:
- a) Treat individuals in hospitals only
 - b) Prevent diseases and promote health in communities**
 - c) Develop new medicines only
 - d) Train doctors and nurses
10. The term biodiversity refers to:
- a) The number of food chains in an area
 - b) Only plants in a forest
 - c) The variety of living organisms in an area**
 - d) The amount of sunlight available
11. Which gas is the main cause of acid rain?
- a) Oxygen
 - b) Carbon dioxide
 - c) Sulfur dioxide**
 - d) Hydrogen
12. The main cause of recent climate change is:
- a) Earth's rotation
 - b) Natural volcanic eruptions only
 - c) Human activities increasing greenhouse gases**
 - d) Lunar phases
13. A resource that can be replaced naturally in a short time is called:
- a) Non-renewable
 - b) Renewable**
 - c) Fossil fuel
 - d) Exhaustible
14. Which of the following is the main goal of recycling?
- a) To create more waste
 - b) To increase pollution
 - c) To reuse materials and reduce resource use**
 - d) To burn plastics
15. The center of an atom is called the:
- a) Electron cloud
 - b) Orbit**

Markhor Junior Contest ®

- c) Nucleus
- d) Proton

16. The horizontal rows in the periodic table are called:

- a) Groups
- b) Periods**
- c) Blocks
- d) Series

17. Which type of bond is formed by the transfer of electrons?

- a) Covalent bond
- b) Metallic bond
- c) Ionic bond**
- d) Hydrogen bond

18. A chemical reaction always involves:

- a) Changing the size of particles
- b) Mixing of colors only
- c) Breaking and forming of chemical bonds**
- d) Physical state change only

19. Substances with a sour taste are usually:

- a) Bases
- b) Acids**
- c) Salts
- d) Metals

20. Which of the following is a mixture?

- a) Water (H_2O)
- b) Air**
- c) Carbon dioxide (CO_2)
- d) Sodium chloride (NaCl)

21. Newton's First Law of Motion is also called the law of:

- a) Momentum
- b) Inertia**
- c) Acceleration
- d) Gravitation

22. Work is done when:

- a) A force is applied but no movement occurs
- b) An object is held without moving
- c) A force is applied and the object moves in the direction of the force**
- d) No force is applied

Markhor Junior Contest ®

23. In a transverse wave, particles of the medium move:

- a) In circles
- b) Perpendicular to the direction of the wave**
- c) Parallel to the wave
- d) Opposite to the source

24. The bouncing back of light from a surface is called:

- a) Refraction
- b) Reflection**
- c) Diffusion
- d) Transmission

25. In an ecosystem, a toxin accumulates in small amounts in plants, but higher amounts in herbivores and even higher in carnivores. This phenomenon is called:

- a) Bioaccumulation
- b) Biomagnification**
- c) Photosynthesis
- d) Decomposition