

Markhor Junior Contest ®

Pioneer Level (Class VII & VIII) Science 2016

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

1. **Which of the following is not a characteristic of a scientific hypothesis?**
 - a) Testable
 - b) Based on prior knowledge
 - c) Always correct**
 - d) Falsifiable
2. **How does mathematics support innovation in STEM?**
 - a) By telling stories of discoveries
 - b) By proving every hypothesis
 - c) By providing tools for measurement, modeling, and prediction**
 - d) By making technology easier to understand
3. **The world's first practical vaccine was developed for which disease?**
 - a) Polio
 - b) Measles
 - c) Smallpox**
 - d) Influenza
4. **Which of these is a product of photosynthesis and a reactant of respiration?**
 - a) Carbon dioxide
 - b) Water
 - c) Glucose**
 - d) ATP
5. **Which statement about energy flow in ecosystems is true?**
 - a) Energy cycles back like nutrients.
 - b) Energy is gained at higher trophic levels.
 - c) Energy flows in one direction and is lost as heat.**
 - d) Energy is created by consumers
6. **Genes are located in:**
 - a) Ribosomes
 - b) Nucleus
 - c) Chromosomes**
 - d) Cytoplasm
7. **Which of these is not a function of the human immune system?**
 - a) Defending against pathogens
 - b) Producing antibodies
 - c) Digesting carbohydrates**
 - d) Remembering past infections

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8. Which is an example of a community health measure?
- a) Eating fruits daily
 - b) Brushing teeth
 - c) Clean water supply and sanitation**
 - d) Taking vitamins
9. Which of the following is a decomposer?
- a) Snake
 - b) Rabbit
 - c) Mushroom**
 - d) Eagle
10. Which pollutant is produced by incomplete combustion of fuels?
- a) Carbon dioxide
 - b) Carbon monoxide**
 - c) Nitrogen gas
 - d) Oxygen
11. Deforestation contributes to climate change because:
- a) Trees produce carbon dioxide
 - b) Trees absorb carbon dioxide, and cutting them increases CO₂**
 - c) Trees reduce rainfall
 - d) Forests trap heat like glass
12. Petroleum and coal are called fossil fuels because:
- a) They look like fossils
 - b) They are formed from ancient plants and animals**
 - c) They are found in fossils only
 - d) They come from rocks
13. Which of the following is a benefit of recycling metals?
- a) Increases mining
 - b) Saves energy and reduces pollution**
 - c) Makes metals weaker
 - d) Destroys biodiversity
14. What is the mass number of an atom?
- a) Number of protons only
 - b) Number of protons + neutrons**
 - c) Number of electrons + protons
 - d) Number of electrons only
15. What happens to atomic size as we move from left to right in a period?
- a) Increases
 - b) Decreases**

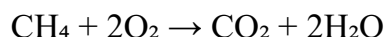
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- c) Stays the same
- d) Doubles

16. Which bond is found in a molecule of water (H₂O)?

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

17. The reaction:



is an example of:

- a) Neutralization
- b) Combustion**
- c) Displacement
- d) Decomposition

18. Which natural indicator changes color in acidic and basic solutions?

- a) Sugar
- b) Salt
- c) Litmus**
- d) Water

19. Which of the following is a homogeneous mixture?

- a) Oil and water
- b) Salt dissolved in water**
- c) Sand and iron filings
- d) Soil

20. The product of mass and velocity is called:

- a) Acceleration
- b) Force
- c) Momentum**
- d) Work

21. Energy in a moving car is mainly:

- a) Potential energy
- b) Kinetic energy**
- c) Heat energy
- d) Elastic energy

22. The number of waves passing a point per second is:

- a) Wavelength
- b) Frequency**
- c) Amplitude
- d) Pitch

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- 23. The splitting of white light into seven colors by a prism is called:**
- a) Refraction
 - b) Reflection
 - c) Dispersion**
 - d) Absorption
- 24. When baking soda is mixed with vinegar, what happens?**
- a) The solution turns blue
 - b) Formation of gas and fizzing
 - c) Nothing happens
 - d) The solution becomes opaque
- 25. A straw appears bent when placed in a glass of water. What causes this?**
- a) The straw actually bends
 - b) Light slows down and changes direction when moving from air to water
 - c) Water magnifies the straw without bending light
 - d) Light travels faster in water than in air