

Markhor Junior Contest ®

Pioneer Level (Class VII & VIII) Science 2012

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

1. **Why is peer review essential in science?**
 - a) It makes scientific papers longer.
 - b) It avoids repeating experiments.
 - c) It ensures the research is checked for accuracy and quality.**
 - d) It proves the scientist is correct.
2. **Which invention shows a direct link between math and technology?**
 - a) Discovery of penicillin
 - b) Theory of relativity
 - c) Computer programming and algorithms**
 - d) Painting of Leonardo da Vinci
3. **Which of the following discoveries helped scientists see bacteria for the first time?**
 - a) Vaccine development
 - b) Light bulb invention
 - c) Microscope invention**
 - d) Discovery of X-rays
4. **In an ocean food web, phytoplankton act as:**
 - a) Primary consumers
 - b) Producers**
 - c) Decomposers
 - d) Secondary consumers
5. **Which of the following is not true about chromosomes?**
 - a) They carry genes.
 - b) They are made of DNA and proteins.
 - c) Their number changes in every body cell of one person.**
 - d) They come in pairs in humans.
6. **Why is cloning not the same as sexual reproduction?**
 - a) It uses two parents
 - b) It produces variation
 - c) It produces genetically identical offspring**
 - d) It requires fertilization
7. **Antibodies are produced by:**
 - a) Red blood cells

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- b) Platelets
 - c) B-lymphocytes (a type of white blood cell)**
 - d) Hormones
8. Which of these is an example of a public health campaign?
- a) A family meal plan
 - b) Polio eradication drive**
 - c) A student brushing teeth
 - d) A patient visiting a doctor
9. A food web is different from a food chain because:
- a) It shows only one path of energy flow
 - b) It shows many interconnected feeding relationships**
 - c) It does not include producers
 - d) It excludes carnivores
10. Which of the following is a renewable alternative to reduce air pollution?
- a) Coal
 - b) Petroleum
 - c) Solar energy**
 - d) Diesel
11. Which international agreement focuses on reducing global greenhouse gas emissions?
- a) Red Cross Agreement
 - b) Geneva Convention
 - c) Paris Agreement**
 - d) Rio Sports Treaty
12. Which of these is the biggest drawback of non-renewable resources?
- a) They are infinite
 - b) They can run out and cause pollution**
 - c) They always produce oxygen
 - d) They are too clean
13. Using biogas from animal waste is an example of:
- a) Non-renewable fuel
 - b) Renewable green energy**
 - c) Metal recycling
 - d) Soil pollution
14. Rusting of iron is a type of:
- a) Neutralization
 - b) Combustion

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c) **Slow oxidation reaction**

d) Double displacement

15. Which of the following is a weak base used in cooking?

a) Salt

b) Vinegar

c) **Baking soda (NaHCO_3)**

d) Lemon juice

16. A mixture of salt and water can best be separated by:

a) Filtration

b) Chromatography

c) **Evaporation**

d) Magnetism

17. When a ball is thrown upward, its kinetic energy gradually changes into:

a) Heat energy

b) **Potential energy**

c) Electrical energy

d) Nuclear energy

18. Which property of sound determines its pitch (highness or lowness)?

a) Amplitude

b) **Frequency**

c) Speed

d) Loudness

19. A microscope produces a magnified image because it uses:

a) Plane mirrors only

b) **Combination of convex lenses**

c) Concave mirrors only

d) Prisms

20. Which condition is necessary for aerobic respiration to produce more energy than anaerobic respiration?

a) Absence of enzymes

b) Absence of oxygen

c) **Presence of oxygen**

d) High glucose concentration

21. An element has 11 protons and 11 electrons. What can you conclude?

a) It is a negatively charged ion

b) **It is neutral**

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- c) It has more neutrons than electrons
- d) It must be a noble gas

22. Which bond forms when two non-metals share electrons?

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

23. A substance has fixed melting point, cannot be separated by physical methods, and its components lose their original properties. It must be:

- a) A mixture
- b) An alloy
- c) A compound**
- d) A solution

24. A box is pushed across a floor with constant speed. Which statement is TRUE?

- a) Applied force is greater than friction
- b) Applied force is less than friction
- c) Applied force equals friction**
- d) No force acts on the box

25. A car moves at a constant speed on a straight road. Suddenly, the driver presses the brakes and the car slows down. Which statement is TRUE?

- a) The car continues moving at the same speed because no force acts on it
- b) The net force on the car is in the direction opposite to its motion**
- c) The brakes create a force in the same direction as the car's motion
- d) The car's speed increases because of inertia