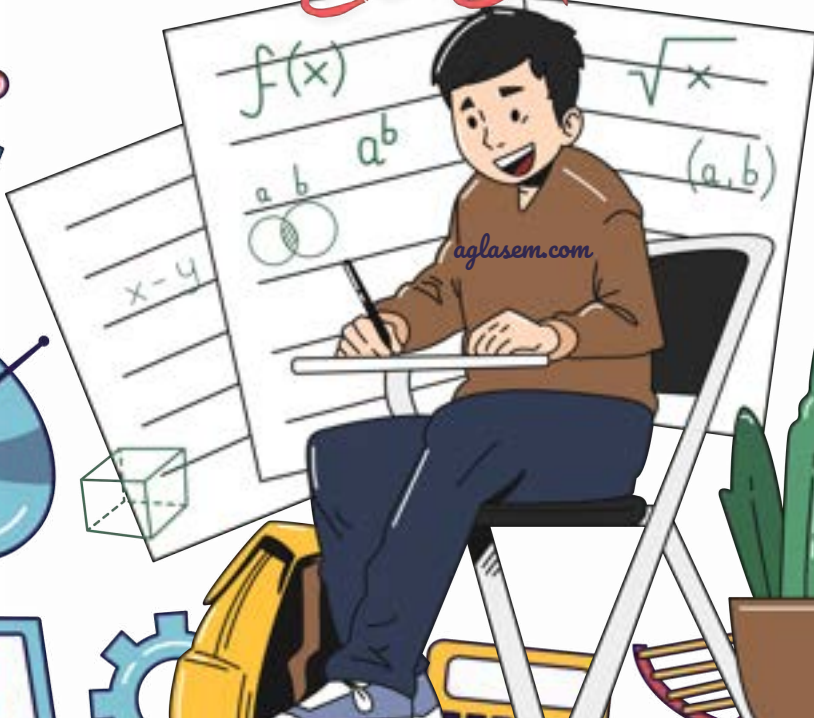




JKBOSE QUESTION PAPERS

Jammu & Kashmir Board of School Education

2024



MSE(SA)-24

Total No. of Questions: 26

AS-3

Total No. of Pages: 4

Subject: Science

Roll No. _____

Time: 2.30 Hrs.

SC-AS

Max. Marks: 50

1. The question paper is divided into four sections-A, B, C and D. There are 26 questions in total.
2. Questions 1 to 13 in Section-A contain Multiple Choice Questions/ Case based questions/Passage/Assertion-Reasoning Questions. Each carries one mark.
3. Questions 14 to 19 in Section-B carry 2 marks each. Answer to these questions should be up to 20 words each.
4. Questions 20 to 24 in Section-C carry 3 marks each. Answer to these questions should be between 40-50 words.
5. Questions 25 to 26 in Section-D carries 5 marks each. Answer to these questions should be between 80-100 words each. An internal choice is given in these questions. Attempt only one choice
6. Write the same question number as given in the question paper while answering the question in your answer book.
7. Continuation sheets, if used, should bear the Roll Number of the Student.

Section-A

Multiple Choice Questions

- Q1. Which scale measures the magnitude of earthquakes?
- a) Richter Scale
 - b) Beaufort Scale
 - c) Fujita Scale
 - d) Mercalli Intensity Scale
- Q2. What is crop rotation?
- a) Planting the same crop in the same field year after year
 - b) Alternating different crops in the same field over several seasons
 - c) Growing crops in rotation with animal grazing
 - d) Introducing genetically modified crops to enhance yield
- Q3. What is static friction?
- a) The friction between two surfaces in motion
 - b) The friction between two surfaces at rest
 - c) The friction between a moving object and the air
 - d) The friction between a stationary object and a fluid

- Q4. What is the general term for the reaction of metals with oxygen?
a) Oxidation. b) Reduction
c) Precipitation d) Sublimation
- Q5. What is the process called when an electric current passes through an electrolyte and causes a chemical reaction?
a) Electroplating~ b) Electrolysis
c) Electromagnetism d) Electrocutation
- Q6. Which of the following is NOT a common type of friendly microbe?
a) Bacteria b) Fungi
c) Virus, d) Yeast
- Q7. Which of the following methods of food preservation involves removing moisture from food?
a) Canning b) Freezing
c) Dehydration d) Pickling

Case Based Questions/Passage

Read the following passage and answer Q8 through Q10 accordingly

Metals and non-metals are two distinct categories of elements found in the periodic table. Each group possesses unique properties and characteristics that differentiate them from one another. Understanding these properties is essential in various fields, including chemistry, materials science, and engineering.

Metals are typically solid materials that have lustrous appearances and good conductors of heat and electricity. They often exhibit high densities and melting points, making them useful in various industrial applications. Metals can be further categorized into alkali metals, alkaline earth metals, transition metals, and inner transition metals, each with its own set of properties and applications.

On the other hand, non-metals are elements that lack the typical characteristics of metals. They can exist in various states of matter, including solids, liquids, and gases. Non-metals are generally poor conductors of heat and electricity, and they often have lower densities and melting points compared to metals. Examples of non-metals include carbon, sulfur, nitrogen, and oxygen, which play crucial roles in biological processes and environmental systems.

Understanding the properties of metals and non-metals allows scientists and engineers to design and develop innovative materials for a wide range of applications. From building structures and electrical devices to manufacturing

chemicals and pharmaceuticals, the properties of these elements shape the world around us

Questions:

- Q8. Which of the following is NOT a characteristic of metals?
- a) Good conductors of heat and electricity
 - b) Low densities
 - c) Lustrous appearance
 - d) High melting points
- Q9. What is one common characteristic of non-metals?
- a) High densities
 - b) Good conductors of heat and electricity
 - c) Poor conductors of heat and electricity
 - d) Lustrous appearance
- Q10. How are metals and non-metals typically distinguished based on their conductive properties?
- a) Metals are good conductors, while non-metals are poor conductors.
 - b) Non-metals are good conductors, while metals are poor conductors.
 - c) Both metals and non-metals are equally good conductors.
 - d) Both metals and non-metals are equally poor conductors.

Assertion-Reasoning Questions

Directions: In the following questions, mark the correct option as

- a. Both Assertion (A) and Reasoning (R) are true and Reasoning (R) is the correct explanation of Assertion (A).
- b. Both Assertion (A) and Reasoning (R) are true but Reason (R) is not the correct explanation of Assertion (A).
- c. Assertion (A) is true and Reasoning (R) is false.
- d. Assertion (A) is false. Reasoning (R) is true.

Q11. Assertion (A): Friction always opposes the relative motion between two surfaces in contact.

Reasoning (R): Friction arises due to the irregularities present on the surfaces in contact, which resist motion by generating heat.

Q12. Assertion (A): Crop rotation is an effective agricultural practice for maintaining soil fertility and reducing the risk of pest infestations.

Reasoning (R): Crop rotation involves planting the same crop in the same field year after year, ensuring consistent yields and minimizing the

need for chemical fertilizers and pesticides.

Q13. Assertion (A): Microorganisms play crucial roles in various ecological processes and industries.

Reasoning (R): Some microorganisms contribute to nutrient cycling, soil fertility, and the production of foods like yogurt and cheese, while others can cause infections and diseases in humans and animals.

Section B

(Very Short Answer Type Questions)

Q14. Discuss two human activities that contribute significantly to global warming and explain their impact on the Earth's climate system.

Q15. Name two solid lubricants and state where they are used?

Q16. What changes occur in Males and Females at puberty?

Q17. What are the different methods of sowing?

Q18. What are the different stages in the development of embryo?

Q19. Elaborate in brief the process of Pasteurization.

Section C

(Short Answer Type Questions)

Q20. What are the different reasons of pollution of Water? Elaborate.

Q21. What is an electroscope? Explain in brief.

Q22. What are endocrine glands and name the hormones secreted by these endocrine glands?

Q23. Draw a simple circuit showing the process of Electroplating and explain in brief.

Q24. Explain in brief the stages in the Life Cycle of a Frog.

Section D

(Long Answer Type Questions)

Q25. Differentiate between regular and diffused reflection. Does defused reflection mean the failure of laws of reflection.

or

Describe the construction of a Kaleidoscope.

Q26. Draw a well labelled diagram with explanation of the parts of a Plant Cell.

or

What are the different types of cell organelles and what are their functions.



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