

CBSE Sample Paper Class 10 Science

Duration: 3 hrs

Total Marks: 80

General Instructions:

- The question paper is divided into five sections – A, B, C, D and E.
 - All questions are compulsory and you should attempt all sections.
 - In sections B, C, D and E you have an option to answer any one question.
 - Questions 1 and 2 in Section A carry one mark.
 - Question 3 to 5 in Section B carry two marks.
 - Question 6 to 15 in Section C carry three marks.
 - Question 16 to 21 in Section D carry five marks.
 - Question 22 to 27 in Section E are based on practical skills. Each question carries two marks. You can answer the questions in brief.
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Section A

1. What are oxidation and reduction reactions? [1]
2. What happens when an acid reacts with a metal? [1]

Section B

3. Write the equation for the chemical reaction: Hydrogen + Chlorine \rightarrow Hydrogen chloride. State whether it is a balanced equation or not? [2]

OR

What are covalent Bonds? Name an element which forms such type of bond with itself and other elements?

4. State a reason why rainwater is a good conductor of electricity while distilled water is a bad conductor of electricity? [2]

OR

Name one characteristic of metals that allow it to be easily flattened into thin sheets. Give an example of such metals.

5. Discuss the importance of Darwin's theory of evolution and Mendel's Experiment? [2]

Section C

6. List three general characteristics of ionic compounds. [3]

OR

State three reasons why DNA copying is important in the process of reproduction.

7. a. Define electric current and describe how it is transferred from one point to another.
b. Also, name the SI unit and device for measuring electric current. [3]
8. State the functions of the following; [3]
a. Neurons b. Receptors c. Vertebral column
9. State Dobereiner's Law of Triads? Given two limitations of Dobereiner's classification? [3]
10. Explain the strategies used by plants for excretion. [3]
11. State three properties of magnetic field lines. [3]
12. Name three energy sources that are renewable along with suitable reasons for your choice. [3]
13. Find the focal length of a spherical mirror when its radius of curvature is;
a. 30cm [3]

OR

Draw a diagram for the formation of an image by a concave mirror when the object is placed at infinity.

14. State three ways in which non-biodegradable substances are dangerous to the environment.
15. Explain the term Power of Accommodation of the eye.

Section D

16. Explain the terms rusting and corrosion. Give three ways to prevent corrosion or rusting. [5]

OR

Draw a diagram representing the longitudinal section of a flower.

17. Briefly describe the process of tissue culture and state its importance. [5]

18. A concave lens has a focal length of 10 cm. At what distance should the object from the lens be placed so that it forms an image at 5 cm from the lens?

19. State Fleming's left-hand rule and describe what is the rule used for. Also, represent it in a diagram. [5]

20. What do you mean by trophic level? Give an example food chain describing the different trophic levels that are present in it. [5]

21. In your own words state the reasons for the need to manage our resources. [5]

Section E

22. Examine a person having a myopic defect in his/her vision and is not able to see objects beyond 2 m clearly. Suggest the type of corrective lens that can be used to correct the vision? [2]

OR

23. Observe a plant and explain in simple terms how the process of transportation of materials occur in plants. [2]

24. You are given two solutions, X and Y where the pH of solution X is 4 and the pH of solution Y is 9. Name the solution having a higher concentration of hydrogen ion. Also, state whether X and Y are basic or acidic. [2]

OR

What happens when metal is burned in air? Give an example.

25. We use soaps in our day to day life. Can you describe the mechanism of the cleaning action of soaps? [2]
26. Take a broken down electric iron and open it to reveal different parts. Here, one thing you will notice is that the coil of the iron is made of an alloy. Can you give reasons as to why an alloy is used? [2]

OR

Have a look at the elements in the periodic table under the third period and classify them as metals and non-metals.

27. Grab a spoon and use it as a mirror to view your face on the curved surface at a distance beyond the focal point. Observe the image formed and explain the changes. [2]