

Science

Practice Sample Paper – 4

(Session 2026–27)

(Class 7)

Time: 3 Hours

Maximum Marks: 80

General Instructions

1. All questions are compulsory.
2. The question paper is divided into Sections A, B, C and D.
3. Draw neat and labelled diagrams wherever required.
4. Answer all questions in clear and concise language.

SECTION A – OBJECTIVE TYPE QUESTIONS

(Questions 1 to 10 carry 1 mark each. Questions 3 and 8 are image-based.)

1. Which of the following is an example of a process in which no new substance is formed? [1]
(a) Rusting of an iron nail (b) Burning of paper
(c) Melting of wax (d) Curdling of milk
2. A solution changes blue litmus paper to red. The solution is most likely [1]
(a) basic (b) acidic
(c) neutral (d) metallic
3. Observe Figure 1 and answer: What change should be made in the switch to complete the circuit? [1]

A SIMPLE ELECTRIC CIRCUIT

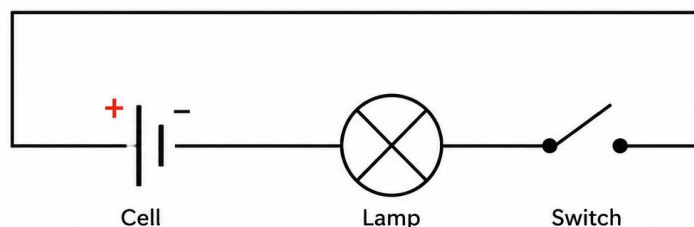


Figure 1

- (a) Keep the switch open (b) Close the switch
(c) Remove the cell (d) Disconnect the lamp
4. The property of a metal that allows it to be beaten into thin sheets is called [1]
(a) ductility (b) malleability
(c) sonority (d) brittleness
5. Which gas is required for combustion? [1]
(a) Nitrogen (b) Oxygen
(c) Hydrogen (d) Carbon dioxide

6. Which of the following is generally a poor conductor of electricity? [1]
(a) Copper (b) Aluminium
(c) Sulfur (d) Iron

7. The period of life generally between 10 and 19 years is called [1]
(a) infancy (b) adolescence
(c) adulthood (d) old age

8. In Figure 2, which sample is most likely to be basic? [1]

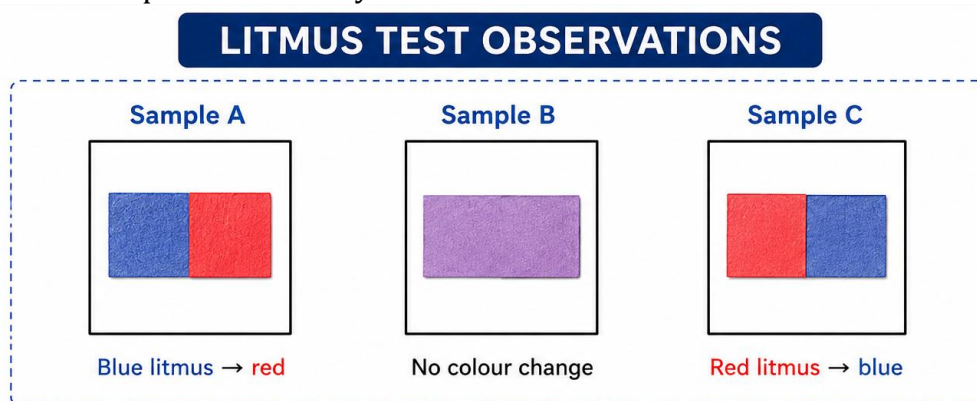


Figure 2

- (a) Sample A (b) Sample B
(c) Sample C (d) All three samples
9. The brown substance formed when iron reacts with air and moisture is called [1]
(a) iron oxide (rust) (b) magnesium oxide
(c) sulfur dioxide (d) calcium carbonate
10. The chemicals released by the body that regulate many changes during adolescence are called [1]
(a) hormones (b) indicators
(c) enzymes (d) nutrients

SECTION B – SHORT ANSWER QUESTIONS

(Questions 11 to 14 carry 3 marks each.)

11. What is an indicator? Name any two indicators and state how they help in identifying the nature of a solution. [3]
12. Observe Figure 2 in question 8 and answer: What do the observations tell you about Samples A, B and C? Give one reason for each identification. [3]
13. Why are metals commonly used for making cooking utensils? State two relevant properties and explain one of them. [3]
14. Differentiate between reversible and irreversible changes. Give one example of each. [3]

SECTION C – DESCRIPTIVE QUESTIONS

(Questions 15 to 18 carry 5 marks each.)

15. Explain the main components of a simple electric circuit. What happens when the switch is open and when it is closed? Draw a labelled circuit using symbols. [5]

16. Observe Figure 3 and answer the following: [5]

CANDLE BURNING AND RUSTING SETUP

Figure 3



Candle: wax melts and vapour burns



Iron nail partly in water (air + water)

- (a) Identify one physical change shown in the candle. [2]
- (b) Identify the chemical change taking place and state why it is chemical. [2]
- (c) Why is heat important in starting combustion? [1]

17. Explain why iron rusts. State the two conditions necessary for rusting and describe any two methods of preventing rust. [5]

18. Describe any five changes or experiences that may occur during adolescence. Include at least one physical change and one behavioural or emotional change. [5]

SECTION D – CASE-BASED / COMPETENCY-BASED QUESTIONS

(Questions 19 and 20 carry 19 marks each. Answer all parts.)

19. A group of students tested lemon juice, soap solution, sugar solution and a salt solution using red and blue litmus paper. They also assembled a simple torch circuit and tested different materials as conductors.

- (a) Which of these solutions would you expect to show acidic behaviour? Explain using litmus. [4]
- (b) Which solution would you expect to show basic behaviour? State the expected litmus change. [4]
- (c) What observation would indicate that a solution is neutral? [3]
- (d) Why does a lamp glow only when the electrical path is complete? [4]
- (e) Name one metal that is a good conductor of electricity and one non-metal that is generally a poor conductor. [4]

20. Study Figure 3 showing a burning candle and an iron nail exposed to air and water. Answer the following:

CANDLE BURNING AND RUSTING SETUP

Figure 3



Candle: wax melts and vapour burns



Iron nail partly in water (air + water)

- (a) Which changes in the candle are physical changes? Explain. [4]
- (b) Which change in the candle is chemical? Give one reason. [4]
- (c) What is ignition temperature? Why is it needed for combustion to begin? [3]
- (d) State the two conditions needed for rusting of iron and name one method of preventing rust. [4]
- (e) What is adolescence? Mention two important changes that may occur during this stage. [4]