

Science

Practice Sample Paper – 5

(Session 2026–27)

(Class 8)(Curiosity Chapter 1 – 6)

Time: 2 Hours 30 Minutes

Maximum Marks: 60

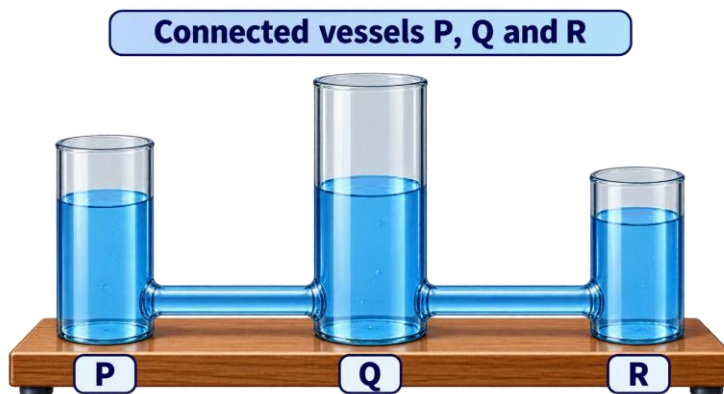
GENERAL INSTRUCTIONS

1. The question paper contains 15 questions divided into five sections - A to E.
2. All questions are compulsory. Internal choices are provided in selected questions.
3. Section A contains 12 MCQs of 1 mark each.
4. Section B contains 4 Very Short Answer questions of 2 marks each.
5. Section C contains 3 Short Answer questions of 3 marks each.
6. Section D contains 3 questions of 5 marks each.
7. Section E contains 4 case/source-based questions of 4 marks each.
8. Five questions are image/diagram based. Observe each figure carefully.

SECTION A

Multiple Choice Questions (12 x 1 = 12)

1. (i) Observe the connected vessels P, Q and R. After the water becomes steady, which statement is correct? [1]



- (A) Water is highest in P
(B) Water is highest in Q
(C) Water is highest in R
(D) Water level is the same in all three

- (ii) Ananda Mohan Chakrabarty developed a special bacterium useful for: [1]

- (A) breaking down oil spills
(B) producing lightning
(C) measuring pressure
(D) making electromagnets

- (iii) Which statement about viruses is correct? [1]

- (A) They multiply independently in soil
(B) They multiply only after entering a living cell
(C) They are always visible to the naked eye
(D) They are a type of mineral

- (iv) A disease caused by lack of a specific nutrient in the diet is called a: [1]

- (A) deficiency disease
(B) vector-borne disease
(C) water-borne disease
(D) contagious injury

- (v) Edward Jenner's work led to the development of the first vaccine against: [1]

- (A) smallpox
(B) dengue
(C) diabetes
(D) asthma

(vi) A conductor that offers comparatively high resistance and is therefore useful as a heating element is: [1]

- (A) nichrome (B) cotton thread
(C) glass (D) wood

(vii) If the terminals of the battery are reversed in a current-carrying wire experiment, the compass deflection is expected to: [1]

- (A) reverse direction
(B) remain permanently fixed
(C) disappear because the wire becomes an insulator
(D) increase the mass of the compass

(viii) The force with which Earth pulls an object towards itself is called its: [1]

- (A) weight (B) pressure
(C) density (D) volume

(ix) Which pair contains only non-contact forces? [1]

- (A) Magnetic and gravitational
(B) Muscular and frictional
(C) Frictional and magnetic
(D) Muscular and electrostatic

(x) The SI unit of pressure is: [1]

- (A) pascal (B) newton
(C) kilogram (D) metre

(xi) High-speed air moving over a roof can lower the air pressure: [1]

- (A) above the roof
(B) only below the floor
(C) inside water pipes only
(D) nowhere around the house

(xii) Assertion (A): Air normally acts as an electrical insulator. [1]

Reason (R): During a very large build-up of charge, air can lose its insulating behaviour and a sudden flow of charge may occur.

- (A) Both A and R are true, and R correctly explains how lightning can occur.
(B) Both A and R are true, but R is unrelated to lightning.
(C) A is true, but R is false.
(D) A is false, but R is true.

SECTION B

Very Short Answer Questions (4 x 2 = 8)

2. Attempt either (A) or (B): [2]

(A) What is biogas? Name the gas present in high proportions in it.

OR

(B) Why are viruses described as acellular? State one condition necessary for multiplication.

3. What are deficiency diseases? State one way in which they can be prevented. [2]

4. Observe the current carrying wire and compass. [2]



(a) What does the compass deflection indicate?

(b) What change would you expect if the direction of current were reversed?

5. Distinguish between mass and weight by stating one characteristic of each. [2]

SECTION C

Short Answer Questions (3 x 3 = 9)

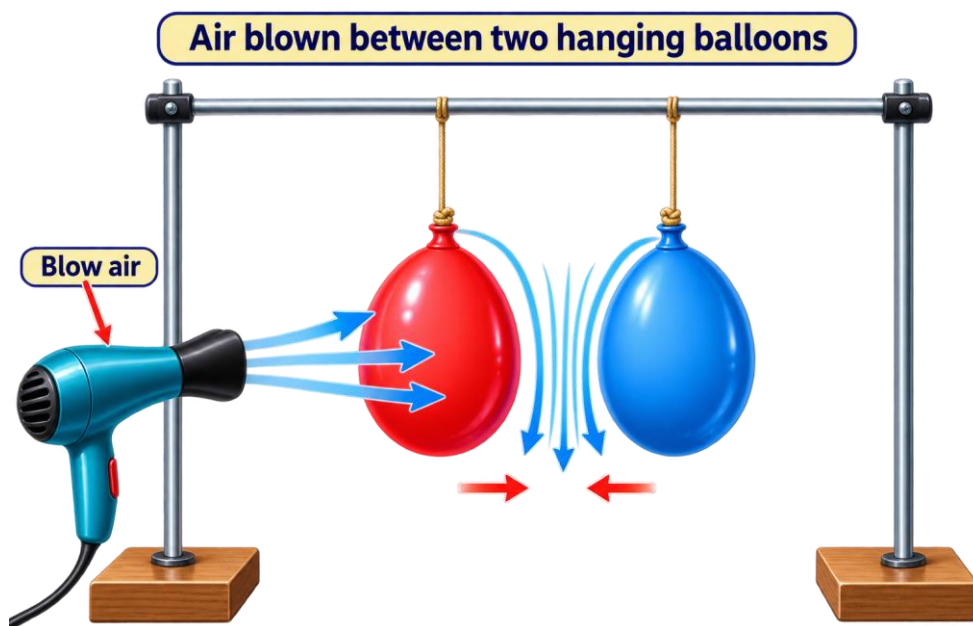
6. Attempt either (A) or (B):

(A) Explain how vaccination prepares the body to fight a particular infection.

OR

(B) Explain how microorganisms can be useful in managing waste and producing fuel. [3]

7. Observe the two hanging balloons while air is blown rapidly through the gap between them. Predict their motion and explain it in terms of air speed and pressure. [3]



8. Why is nichrome suitable for heating elements? State any three factors that affect the heat produced in a wire carrying electric current. [3]

SECTION D

Long Answer / Skill-Based Questions (3 x 5 = 15)

9. Fill in the blanks using suitable words from the box:

[acellular, immunity, resistance, pascal, atmospheric]

- (a) Viruses are microscopic and _____.
- (b) Vaccination helps the body develop _____ against particular infections.
- (c) Opposition offered by a conductor to electric current is called _____.
- (d) The SI unit of pressure is _____.
- (e) The pressure exerted by the air around us is called _____ pressure.

[5]

10. Observe the two rubber suckers M and N pressed on different surfaces. Answer the following: [5]

- (a) Which sucker is more likely to stick firmly? (1)
- (b) Why does the other sucker fail to make an effective seal? (1)
- (c) Which pressure outside the sucker helps keep the well-sealed sucker attached? (1)
- (d) Why must the surface be smooth for effective sticking? (1)
- (e) Name one everyday object that works using a similar suction effect. (1)



11. Explain the process of lightning formation from charge separation inside clouds to the production of thunder. Also state two precautions to follow during lightning. [5]

OR

A boat has a base area of 4 m^2 . Four persons, each weighing 600 N , sit in it. Calculate the pressure due to their total weight on the base. Then state what happens to pressure if the same total force acts on a base area of 8 m^2 .

SECTION E

Case / Source-Based Questions (4 x 4 = 16)

12. A researcher uses bacteria that can live without oxygen to decompose plant and animal waste. During decomposition, a combustible gas mixture is produced and collected for use as fuel. [4]

- (a) What is this gas mixture called? (1)
- (b) Name the major combustible gas present in high proportion. (1)
- (c) State two uses of this gas mixture mentioned in the chapter. (2)

OR

(d) Explain two environmental benefits of using microorganisms to decompose organic waste. (2)

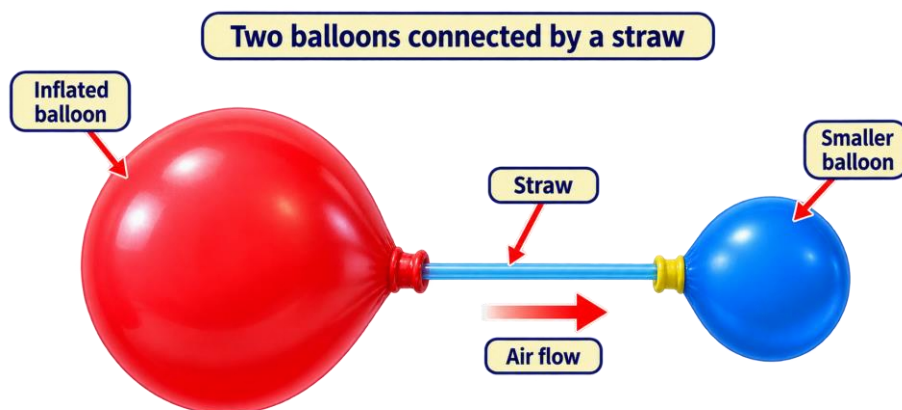
13. A student connects two identical nichrome wires separately to the same cell. Wire X is longer than Wire Y, but both have the same thickness. In another trial, two wires of equal length but different thickness are tested for the same duration. [4]

- (a) Name the effect of electric current being investigated. (1)
- (b) What form of energy is produced because of resistance? (1)
- (c) State any two wire-related factors that influence the heat generated. (2)

OR

(d) Why should wires, plugs and sockets of proper current rating be used in household circuits? Give two reasons. (2)

14. Observe the two balloons connected by a straw. Initially, the left balloon has higher air pressure than the smaller balloon. [4]



- (a) In which direction will air initially move? (1)
- (b) Why does air move in that direction? (1)
- (c) When will the flow of air stop? Explain. (2)

OR

(d) Use the same principle to explain why differences in air pressure can produce winds. (2)

15. During a violent storm, very fast winds pass over a weak roof. The air pressure above the roof becomes much lower than the pressure inside the house. [4]

- (a) What happens to air pressure when wind speed becomes very high? (1)
- (b) Which side of the roof has greater pressure in this situation? (1)
- (c) Explain why the roof may be lifted or blown away. (2)

OR

(d) Explain why reducing the pressure difference between the inside and outside of a house can reduce the risk of the roof being blown off. (2)