

CLASS 8 — SCIENCE SAMPLE PAPER

Physics & Chemistry — Full Syllabus Practice Paper

Time Allowed: 2 Hours

Maximum Marks: 80

General Instructions: (i) All questions are compulsory. (ii) The paper is divided into sections as marked. (iii) Read each question carefully before answering. (iv) Draw diagrams wherever necessary.

SECTION A — Physics (Very Short Answer, 1 mark each)

Answer in one word or one sentence.

1. Define force. State its SI unit.
2. Write the formula relating pressure, force, and area.
3. Name the SI unit of pressure.
4. What is friction? Name its three types.
5. How does friction depend on the roughness of a surface?
6. How is sound produced?
7. Define frequency and state its SI unit.
8. What is the audible range of frequency for the human ear?
9. What is electroplating? Give one use.
10. What is lightning? How is it caused?
11. State the laws of reflection of light.
12. Differentiate between regular and diffused (irregular) reflection.
13. List the planets of the solar system in order from the Sun.

SECTION B — Physics (Short Answer, 2 marks each)

Answer in 2-3 sentences.

1. A force of 20 N acts on an area of 4 m². Calculate the pressure exerted.
2. Explain why it is easier to walk on a rough surface than on a slippery one.
3. Explain how sound travels from a vibrating object to our ears.
4. Describe the process of electroplating with one practical application.
5. Why is it advisable to stay indoors during a thunderstorm?

SECTION C — Chemistry (Very Short Answer, 1 mark each)

Answer in one word or one sentence.

1. List the steps involved in crop production in order.
2. Differentiate between manure and fertilizer.

3. Name four types of microorganisms.
4. What is fermentation? Name the organism responsible.
5. What is nitrogen fixation? Name the bacteria responsible.
6. Name two synthetic fibres.
7. Differentiate between thermoplastics and thermosetting plastics.
8. List three properties of metals.
9. List three properties of non-metals.
10. Name two fossil fuels.
11. What is fractional distillation of petroleum used for?
12. Define combustion. Name the three types of combustion.
13. What is ignition temperature?
14. Define calorific value and state its unit.
15. What is a Wildlife Sanctuary?
16. What is the Red Data Book?

SECTION D — Chemistry (Short Answer, 2 marks each)

Answer in 2-3 sentences.

1. Explain the difference between a good conductor and a poor conductor with respect to electrolytes.
2. Describe two harmful effects and two beneficial effects of microorganisms.
3. Explain why LPG is considered a better fuel than wood for cooking.
4. Write the reaction of a metal with dilute acid, and explain the gas evolved with a test.
5. Explain why forests are important for the conservation of biodiversity.
6. Differentiate between rapid combustion and spontaneous combustion with examples.

SECTION E — Long Answer (3-5 marks each)

Answer in detail with diagrams where necessary.

1. Explain the different types of friction (static, sliding, rolling) with examples, and describe two methods to reduce friction.
2. Describe the process of combustion, including ignition temperature and the different types of combustion, with suitable examples.
3. Explain the reactions of metals and non-metals with oxygen, water, and dilute acids with balanced equations.
4. Describe how coal and petroleum are formed and list the various useful products obtained from petroleum refining.
5. Explain the importance of conserving plants and animals, and describe the roles of national parks, wildlife sanctuaries, and biosphere reserves.