

CLASS 7 — 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 temperature. Name the instrument used to measure it.
2. Convert 37°C into Fahrenheit.
3. Name the three modes of heat transfer.
4. Which mode of heat transfer takes place in vacuum?
5. Differentiate between uniform and non-uniform motion.
6. What is a simple pendulum? Define its time period.
7. State the SI unit of speed.
8. Differentiate between a speedometer and an odometer.
9. What is the heating effect of electric current? Give one application.
10. What is an electromagnet? Name two factors that affect its strength.
11. What causes wind to blow?
12. What is a cyclone?

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

Answer in 2-3 sentences.

1. A pendulum completes 20 oscillations in 40 seconds. Find its time period.
2. Explain why woollen clothes keep us warm in winter.
3. Describe an activity to show that air expands on heating.
4. Explain the magnetic effect of electric current with an example.
5. Why are cyclone warnings issued before a cyclone strikes an area?

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

Answer in one word or one sentence.

1. Define photosynthesis and write its word equation.
2. What is chlorophyll?
3. Differentiate between autotrophic and heterotrophic nutrition.

4. Name a parasitic plant and explain its mode of nutrition.
5. What is saprotrophic nutrition? Give one example.
6. List the steps involved in nutrition in animals.
7. Name the parts of the human digestive system in order.
8. What are animal fibres? Give two examples.
9. What is sericulture?
10. Define acid and base with one example of each.
11. What is an indicator? Name two natural indicators.
12. Write the general equation for a neutralisation reaction.
13. Differentiate between physical and chemical changes.
14. Write the chemical equation for rusting of iron.
15. What is crystallisation? Give one use.
16. What is the water table?

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

Answer in 2-3 sentences.

1. Explain the process of digestion in the human body briefly.
2. How is silk obtained from a silkworm cocoon? Explain briefly.
3. Why should farmers be encouraged to use manure along with fertilizers?
4. Explain why cutting of trees (deforestation) is harmful to the environment.
5. Differentiate between rusting and crystallisation with examples.
6. Explain the importance of groundwater conservation.

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

Answer in detail with diagrams where necessary.

1. Explain the process of photosynthesis in detail, including the raw materials required and the products formed.
2. Describe the three modes of heat transfer (conduction, convection, radiation) with one everyday example each.
3. Explain the human digestive system with a labelled diagram, describing the function of each organ.
4. What are acids, bases, and salts? Explain the concept of neutralisation with a real-life example.
5. Describe how forests act as a lifeline for the environment, including their role in the water cycle and providing habitat.