CBSE Class 8 Science

Sample Question Paper 2026-27 (Set 1)

Subject: Science | **Class:** VIII | **Textbook:** Curiosity **Time Allowed:** 3 Hours | **Maximum Marks:** 80

Prepared by Sunbeam World School for practice. Based on the Class VIII NCERT textbook Curiosity for 2026-27. CBSE does not prescribe a Class 8 paper pattern, so this paper follows the format most CBSE schools use for the annual exam.

General Instructions

1. This question paper contains **38 questions**. All questions are compulsory.
2. The paper is divided into **five Sections: A, B, C, D and E**.
3. **Section A** has 20 questions of 1 mark each, including two Assertion and Reason questions.
4. **Section B** has 5 questions of 2 marks each. Answer in about 30 to 50 words.
5. **Section C** has 6 questions of 3 marks each. Answer in about 50 to 80 words.
6. **Section D** has 4 questions of 5 marks each. Answer in about 80 to 120 words.
7. **Section E** has 3 case-based questions of 4 marks each.
8. Internal choice is given in some questions.
9. Draw neat, labelled diagrams wherever required.

Blueprint: Chapter-Wise Distribution

Chapter	Marks
The Invisible Living World: Beyond Our Naked Eye	7
Health: The Ultimate Treasure	8
Electricity: Magnetic and Heating Effects	14
Exploring Forces	4
Pressure, Winds, Storms, and Cyclones	10
Particulate Nature of Matter	4
Nature of Matter: Elements, Compounds, and Mixtures	10
The Amazing World of Solutes, Solvents, and Solutions	5
Light: Mirrors and Lenses	9
Keeping Time with the Skies	3
How Nature Works in Harmony	5
Our Home: Earth, a Unique Life-Sustaining Planet	1
Total	**80**

SECTION A

20 questions of 1 mark each

1. The microorganism that helps turn milk into curd is (a) yeast (b) Lactobacillus (c) Rhizobium (d) Plasmodium

2. Dough rises when yeast is added because yeast releases (a) oxygen (b) carbon dioxide (c) nitrogen (d) hydrogen

3. Which of these diseases is caused by a virus? (a) Typhoid (b) Malaria (c) Common cold (d) Cholera

4. A vaccine protects us from a disease by (a) killing all microbes in the body (b) training the body's immune system to recognise the germ (c) supplying vitamins to the body (d) raising the body temperature

5. Which appliance works on the heating effect of electric current? (a) Electric bell (b) Electric iron (c) Magnetic compass (d) Electric fan

6. When a current-carrying wire is placed near a magnetic compass, the needle (a) melts (b) deflects (c) glows (d) stays still

7. Which of the following is a non-contact force? (a) Friction (b) Muscular force (c) Magnetic force (d) Force applied by hand

8. A sharp knife cuts more easily than a blunt one because it (a) has a larger area, so more pressure (b) has a smaller area, so more pressure (c) has a smaller area, so less pressure (d) is heavier

9. Wind blows from a region of (a) low pressure to high pressure (b) high pressure to low pressure (c) cold air to warm air only (d) equal pressure on both sides

10. In which state are the particles most closely packed? (a) Solid (b) Liquid (c) Gas (d) Equally packed in all states

11. Which of the following is a compound? (a) Oxygen (b) Water (c) Air (d) Iron

12. Air is an example of (a) an element (b) a compound (c) a mixture (d) a metal

13. A solution in which no more solute can dissolve at a given temperature is called (a) dilute (b) saturated (c) unsaturated (d) concentrated

14. On heating, the solubility of most solids in water (a) increases (b) decreases (c) stays the same (d) becomes zero

15. The image formed by a plane mirror is (a) real and inverted (b) virtual, erect and of the same size (c) virtual and magnified (d) real and diminished

16. A lens that is thicker in the middle than at the edges is (a) concave (b) convex (c) plane (d) cylindrical

17. The time from one full moon to the next is about (a) 7 days (b) 15 days (c) 29.5 days (d) 365 days

18. In the food chain grass → grasshopper → frog → snake, the producer is (a) grass (b) grasshopper (c) frog (d) snake

19. Assertion and Reason. Assertion (A): Earth is the only known planet that supports life. **Reason (R):** Earth has liquid water, a suitable range of temperature and an atmosphere containing oxygen. (a) Both A and R are true and R is the correct explanation of A (b) Both A and R are true but R is not the correct explanation of A (c) A is true but R is false (d) A is false but R is true

20. Assertion and Reason. Assertion (A): Salt can be separated from salt water by filtration. **Reason (R):** Salt dissolves completely in water. (a) Both A and R are true and R is the correct explanation of A (b) Both A and R are true but R is not the correct explanation of A (c) A is true but R is false (d) A is false but R is true

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SECTION B

5 questions of 2 marks each

21. Give two useful and two harmful roles of microorganisms. **OR** Why are antibiotics not effective against the common cold?

22. Suggest two ways to prevent the spread of diseases carried by mosquitoes.

23. What is the difference between a mixture and a compound? Give one example of each.

24. Why does the Moon appear to change its shape during a month? **OR** Why do we add an extra day to the calendar every four years?

25. Give one use each of a convex mirror, a concave mirror, a convex lens and a concave lens.

SECTION C

6 questions of 3 marks each

26. Describe the role of microorganisms in (i) nitrogen fixation, (ii) decomposition, and (iii) making curd.

27. What is the heating effect of electric current? Name two appliances that use it and one safety device that works on it.

28. "Friction is both a friend and a foe." Explain with two examples of each. Suggest one way to reduce friction.

29. Describe an activity to show that air exerts pressure. State what you observe and conclude.

30. Using the idea that matter is made of particles, explain why: (i) gases can be compressed easily, (ii) solids have a fixed shape, (iii) the smell of perfume spreads across a room.

31. How would you prepare a saturated solution of common salt at room temperature? What happens if this solution is heated and more salt is added, and then the solution is cooled? **OR** Give two differences between a real image and a virtual image, with one example of each.

SECTION D

4 questions of 5 marks each

32. (i) What is an electromagnet? Describe how you can make one using an iron nail, a wire and a cell. **(3)** (ii) State two ways to increase the strength of an electromagnet. **(2) OR** (i) Give two differences between an electromagnet and a permanent magnet. **(2)** (ii) Give three uses of electromagnets in daily life. **(3)**

33. (i) Explain how a cyclone is formed. **(3)** (ii) State two safety measures people should take when a cyclone warning is issued. **(2)**

34. (i) Classify the following into elements, compounds and mixtures: copper, common salt, sugar solution, carbon dioxide, air, gold, soil, water. **(3)** (ii) How would you separate a mixture of sand, salt and water? **(2)**

35. (i) State the two laws of reflection of light. **(2)** (ii) Why is a convex mirror used as a rear-view mirror in vehicles? **(2)** (iii) Why is the word AMBULANCE written in reverse on the front of an ambulance? **(1) OR** (i) Give two differences between a convex lens and a concave lens. **(2)** (ii) How does a magnifying glass help us see small objects? **(2)** (iii) Why should we never look at the Sun through a lens? **(1)**

SECTION E

3 case-based questions of 4 marks each

36. Case Study: The Hygiene Drive

After several students fell ill with stomach infections, a school started a hygiene drive. Students were asked to wash their hands with soap before meals, drink only filtered or boiled water, and keep the area around the school free of stagnant water. The school nurse also reminded parents about the vaccination schedule for their children.

(i) Why is washing hands with soap better than washing with water alone? **(1)** (ii) Name one disease that spreads through contaminated water. **(1)** (iii) How do a balanced diet, regular exercise and enough sleep help the body fight disease? **(2) OR** (iii) How does vaccinating most children in a community also protect those who are not vaccinated? **(2)**

37. Case Study: The Room Heater

Riya's family uses an electric room heater in winter. Its coil glows red when it is switched on. One evening, when the heater, a geyser and an iron were all switched on from the same socket, the fuse blew and the power went off.

(i) Which effect of electric current makes the heater coil glow? **(1)** (ii) Why is a fuse wire made of a material with a low melting point? **(1)** (iii) Explain why the fuse blew and how this protected the house. **(2) OR** (iii) Give two properties of the material used for the heating coil of a heater. **(2)**

38. Case Study: Life in a Pond

In a village pond, tiny algae are eaten by small fish, small fish are eaten by bigger fish, and the bigger fish are caught by a kingfisher. When plants and animals in the pond die, their remains are broken down and the nutrients return to the water.

(i) Name the producer in this pond. **(1)** (ii) What may happen to the number of small fish if all the bigger fish are removed? **(1)** (iii) What is the role of decomposers in the pond, and why is this important? **(2) OR** (iii) Why are there fewer kingfishers than small fish in this pond? **(2)**

MARKING SCHEME

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Marks are shown in brackets. Accept any other correct answer with the same meaning.

SECTION A (20 × 1 = 20)

Q	Answer	Q	Answer
1	(b) Lactobacillus	11	(b) Water
2	(b) carbon dioxide	12	(c) a mixture
3	(c) Common cold	13	(b) saturated
4	(b)	14	(a) increases
5	(b) Electric iron	15	(b)
6	(b) deflects	16	(b) convex
7	(c) Magnetic force	17	(c) 29.5 days
8	(b)	18	(a) grass
9	(b)	19	(a)
10	(a) Solid	20	(d)

- Q20: Filtration cannot separate a dissolved substance, so A is false; salt is separated by evaporation. R is true.

SECTION B (5 × 2 = 10)

21. Useful (any two): making curd, bread, medicines and antibiotics, fixing nitrogen in soil, decomposing waste **(1)** Harmful (any two): causing diseases, spoiling food, damaging crops **(1) OR** Antibiotics act only on bacteria **(1)**; the common cold is caused by a virus, so antibiotics cannot kill it **(1)**

22. Any two: do not let water collect in coolers, pots or tyres; use mosquito nets and repellents; spray insecticide where mosquitoes breed; wear full-sleeved clothes **(1 + 1)**

23. In a mixture, the substances keep their own properties and can be separated by physical methods; in a compound, elements combine chemically in a fixed ratio and the properties change **(1)** Examples: mixture: air, salt solution, soil; compound: water, salt, carbon dioxide **(½ + ½)**

24. The Moon does not make its own light; it reflects sunlight **(1)**. As it moves around the Earth, we see different portions of its sunlit half, which appear as phases **(1) OR** The Earth takes about 365¼ days to go around the Sun **(1)**; the extra quarter day adds up to one full day every four years, so a leap year has 366 days **(1)**

25. Convex mirror: rear-view mirror; concave mirror: torch reflector, shaving mirror or dentist's mirror; convex lens: magnifying glass or spectacles for long sight; concave lens: spectacles for short sight **(½ × 4)**

SECTION C (6 × 3 = 18)

26. (i) Bacteria such as Rhizobium in root nodules of pulse plants convert nitrogen from the air into compounds plants can use **(1)** (ii) Bacteria and fungi break down dead plants and animals into simple substances, returning nutrients to the soil **(1)** (iii) Lactobacillus bacteria multiply in milk and turn it into curd **(1)**

27. When current flows through a wire, the wire gets heated; this is the heating effect of current **(1)** Appliances (any two): electric iron, heater, geyser, toaster, kettle **(1)** Safety device: electric fuse **(1)**

28. Friend (any two): helps us walk without slipping, lets brakes stop vehicles, helps us write and hold things **(1)** Foe (any two): wears out shoe soles and machine parts, produces unwanted heat, wastes energy **(1)** Reduce (any one): oil or grease, ball bearings, polishing surfaces, streamlined shapes **(1)**

29. Activity (any correct one): fill a glass to the brim with water, cover it with a card and turn it upside down while holding the card, then let go **(1)** Observation: the card stays in place and the water does not fall **(1)** Conclusion: air pushes up on the card, so air exerts pressure **(1)**

30. (i) Gas particles are far apart with large spaces between them, so they can be pushed closer **(1)** (ii) Solid particles are tightly packed and held by strong forces, so they cannot move from their positions **(1)** (iii) Perfume particles move freely and mix with air particles, spreading across the room (diffusion) **(1)**

31. Add salt to water at room temperature, stirring, until no more dissolves and some salt stays at the bottom **(1)** On heating, more salt dissolves because solubility increases with temperature **(1)** On cooling, the extra salt separates out (crystals appear) because solubility falls **(1) OR** Real image: can be taken on a screen, is usually inverted; example: image of a candle on a screen using a convex lens **(1½)** Virtual image: cannot be taken on a screen, is erect; example: image in a plane mirror **(1½)**

SECTION D (4 × 5 = 20)

32. (i) An electromagnet is a coil of wire around an iron core that becomes a magnet only while current flows through it **(1)** Wind an insulated wire tightly around an iron nail, connect its ends to a cell through a switch, and switch it on; the nail now attracts pins **(1)**; when switched off, the pins fall **(1)** (ii) Any two: increase the number of turns of the coil; use more cells (more current); use a soft iron core **(1 + 1) OR** (i) Electromagnet: works only while current flows, strength can be changed; permanent magnet: always magnetic, fixed strength **(1 + 1)** (ii) Any three: electric bell, cranes that lift scrap iron, loudspeakers, electric motors, MRI machines, doorbells **(1 × 3)**

33. (i) Over warm seas, water evaporates and warm moist air rises, creating a region of low pressure **(1)**. Surrounding air rushes in towards this low pressure and also rises, and the cycle repeats **(1)**. The rising air cools, forms clouds and releases heat, so the system grows into a spinning storm with strong winds and heavy rain around a calm centre (eye) **(1)** (ii) Any two: move to a safe shelter, follow official warnings, stay indoors away from the coast, store drinking water and food, keep emergency kits ready, do not go fishing **(1 + 1)**

34. (i) Elements: copper, gold **(1)**; compounds: common salt, carbon dioxide, water **(1)**; mixtures: sugar solution, air, soil **(1)** (ii) Filter the mixture to separate sand as residue **(1)**; evaporate the filtrate to get salt **(1)**

35. (i) The angle of incidence is equal to the angle of reflection **(1)**; the incident ray, reflected ray and normal at the point of incidence lie in the same plane **(1)** (ii) A convex mirror always forms an erect, smaller image **(1)** and gives a wider view of the traffic behind **(1)** (iii) Due to lateral inversion, drivers ahead read it correctly in their rear-view mirrors **(1) OR** (i) Convex lens: thicker in the middle, converges light; concave lens: thinner in the middle, diverges light **(1 + 1)** (ii) A convex lens held close to an object forms an erect, enlarged image, so small details look bigger **(2)** (iii) A lens converges sunlight to a point, which can seriously damage the eyes **(1)**

SECTION E (3 × 4 = 12)

36. (i) Soap removes germs and grease that water alone cannot wash away **(1)** (ii) Any one: cholera, typhoid, diarrhoea, jaundice (hepatitis A) **(1)** (iii) A balanced diet gives the nutrients the immune system needs; exercise and sleep keep the body strong and help it recover, so it resists infections better **(2) OR** (iii) When most people are vaccinated, the germ cannot spread easily from person to person **(1)**, so those who cannot be vaccinated are less likely to be exposed (community protection) **(1)**

37. (i) Heating effect of electric current **(1)** (ii) So that it melts quickly and breaks the circuit when too much current flows **(1)** (iii) Too many high-power appliances drew a very large current from one socket (overloading) **(1)**; the fuse wire melted and broke the circuit, preventing overheating of wires and a possible fire **(1) OR** (iii) Any two: high resistance, high melting point, does not burn or oxidise easily at high temperature (for example, nichrome) **(1 + 1)**

38. (i) Algae **(1)** (ii) The number of small fish will increase, at least for some time **(1)** (iii) Decomposers break down dead remains into simple nutrients **(1)**; these nutrients return to the water and are used again by algae, keeping the pond healthy **(1) OR** (iii) Only a small part of the energy at each level passes to the next **(1)**, so less energy is available at the top and fewer kingfishers can be supported **(1)**

End of marking scheme.