

**केन्द्रीय विद्यालय संगठन, कोलकाता संभाग**  
**KENDRIYA VIDYALAYA SANGATHAN, KOLAKATA REGION**  
**अर्ध वार्षिक परीक्षा / HALY YEARLY EXAMINATION, 2026-27**

कक्षा/ CLASS :VIII

समय/ Time: 02:30 घंटे/ Hours

विषय/ SUBJECT : विज्ञान / SCIENCE

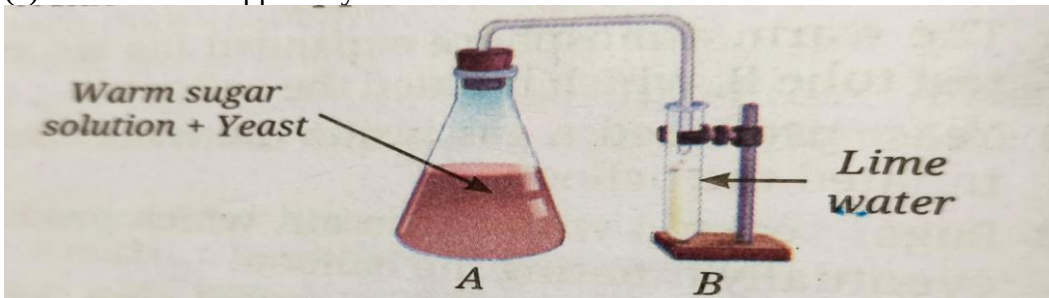
अधिकतम अंक/ Max. Marks: 60

**GENERAL INSTRUCTIONS:**

- The question paper comprises four sections A, B, C and D.
- All questions are compulsory. Internal choices are provided in a few questions.
- Questions of section A are MCQ of 1 mark each.
- Questions of section B are VSA type question of 2 marks each.
- Questions of section C are SA type question of 3 marks each
- Questions of section D are LA type question of 4 marks each.

| Q. No.                     | Questions                                                                                                                                                                                                                                                                                                                                                                                                                               | Marks |
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| <b>SECTION A (1x18=18)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |
| 01                         | A rubber sucker (M) is pressed on a flat smooth surface and an identical sucker (N) is pressed on a rough surface:<br>(a) Both M and N will stick to their surfaces.<br>(b) Both M and N will not stick to their surfaces.<br>(c) M will stick but N will not stick.<br>(d) M will not stick but N will stick.                                                                                                                          | 1     |
| 02                         | A student notes that sugar dissolves faster in hot water than in cold water. This is an example of<br>(a) Recording data only<br>(b) Observing and comparing<br>(c) Memorizing a definition<br>(d) Drawing diagrams                                                                                                                                                                                                                     | 1     |
| 03                         | Which of the following microorganisms is known to live in the root nodules of leguminous plants (like peas and beans) and plays a crucial role in converting atmospheric nitrogen into a soluble form that plants can absorb?<br>(a) Yeast<br>(b) Rhizobium<br>(c) Lactobacillus<br>(d) Amoeba                                                                                                                                          | 1     |
| 04                         | You design a simple experiment to test how heat leads to pressure buildup in steam. Which of these is a variable you must control?<br>(a) Amount of water<br>(b) Colour of container<br>(c) Time of day<br>(d) Observation speed                                                                                                                                                                                                        | 1     |
| 05                         | A water tank is placed on the roof of a building at a height 'H'. To get water with more pressure on the ground floor, one has to<br>(a) increase the height 'H' at which the tank is placed.<br>(b) decrease the height 'H' at which the tank is placed.<br>(c) replace the tank with another tank of the same height that can hold more water.<br>(d) replace the tank with another tank of the same height that can hold less water. | 1     |
| 06                         | What is the role of cell wall in plant cells?<br>(a) Controls cell division<br>(b) Provides shape and protection<br>(c) Makes chlorophyll<br>(d) Stores food                                                                                                                                                                                                                                                                            | 1     |
| 07                         | Which of the following is a unicellular organism?<br>(a) Amoeba<br>(b) Human cheek cell<br>(c) Leaf cell<br>(d) Root hair cell                                                                                                                                                                                                                                                                                                          | 1     |
| 08                         | Vaccination works by stimulating body's immune system to produce<br>(a) Pain<br>(b) Antibodies<br>(c) Flavour<br>(d) Toxins                                                                                                                                                                                                                                                                                                             | 1     |

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| 09                        | Diseases can be broadly grouped into communicable and non-communicable diseases. From the options given below, identify the non-communicable diseases<br>(i) Typhoid (ii) Asthma (iii) Diabetes (iv) Measles<br>(a) (i) and (ii) (b) (ii) and (iii)<br>(c) (i) and (iv) (d) (ii) and (iv)                                                                                                  | 1 |
| 10                        | What is the device used to measure weight?<br>(a) Thermometer (b) Barometer<br>(c) Spring balance (d) Voltmeter                                                                                                                                                                                                                                                                            | 1 |
| 11                        | Force can change which of the following?<br>(a) Speed of the body (b) Direction of motion<br>(c) Shape of the body (d) All of the above                                                                                                                                                                                                                                                    | 1 |
| 12.                       | When two similar charged balloons brought near to each other, they repel each other. Which type of force is responsible for this?<br>(a) Muscular force (b) Electrostatic force<br>(c) Gravitational force (d) Magnetic force                                                                                                                                                              | 1 |
| 13                        | Force is described in science as<br>(a) Pressure only (b) Push or pull due to interaction<br>(c) Shape changing agent only (d) Light effect                                                                                                                                                                                                                                                | 1 |
| 14                        | Which disease(s) among the following may spread if drinking water gets contaminated by the excreta from an infected person?<br>(a) Malaria (b) Tuberculosis<br>(c) Influenza (d) Cholera                                                                                                                                                                                                   | 1 |
| 15                        | In the structure of a severe cyclonic storm, what is the name given to the calm, cloudless, and low-pressure centre of the storm, which is typically 10 to 30 km in diameter?<br>(a) The funnel (b) The eye of the cyclone<br>(c) The storm surge (d) The anvil top                                                                                                                        | 1 |
| 16                        | Which of the following is NOT a recommended safety measure to be followed during a cyclone?<br>(a) Staying away from windows, glass doors, and outer walls.<br>(b) Taking shelter under an isolated tree or a weak, temporary shed.<br>(c) Keeping an emergency kit with dry food, water, and essential medicines ready.<br>(d) Avoiding contact with wet switches and fallen power lines. | 1 |
| 17                        | What causes the compass needle to deflect when placed near a current-carrying wire?<br>(a) Heat generated by the wire<br>(b) Vibration of the wire<br>(c) Magnetic field produced by the electric current<br>(d) Movement of air around the wire                                                                                                                                           | 1 |
| 18                        | Nichrome wire is commonly used in electrical heating devices because it<br>(a) It is a good conductor of electricity.<br>(b) It generates more heat for a given current.<br>(c) It is cheaper than copper.<br>(d) It is an insulator of electricity.                                                                                                                                       | 1 |
| <b>SECTION B (2x6=12)</b> |                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 19                        | In a scientific investigation, what is a 'hypothesis'? State one essential characteristic of a good hypothesis.                                                                                                                                                                                                                                                                            | 2 |
| 20                        | When our body encounters a pathogen for the first time, the immune response is generally low but on exposure to the same pathogen again, the immune response by the body is much more compared to the first exposure. Why is it so?                                                                                                                                                        | 2 |
| 21                        | Name the microorganism commonly used in the baking industry and explain the process by which it makes the dough rise.                                                                                                                                                                                                                                                                      | 2 |
| 22                        | What is an electromagnet? State one way to increase the strength of an electromagnet.                                                                                                                                                                                                                                                                                                      | 2 |
| 23                        | Two balloons rubbed with a woollen cloth are brought near each other. What would happen and why?                                                                                                                                                                                                                                                                                           | 2 |
| 24                        | What are the essential components required to construct a simple Voltaic (or Galvanic) cell,                                                                                                                                                                                                                                                                                               | 2 |

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|                            | and by what process does it generate electricity?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
| <b>SECTION-C (3x6=18)</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| 25                         | <p>Observe the set-up given in Fig. and answer the following questions:</p> <p>(a) What happens to the sugar solution in flask A?</p> <p>(b) What do you observe in test tube B after four hours? Why do you think this happened?</p> <p>(c) What would happen if yeast was not added in flask A?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3 |
| 26                         | <p>There is a flu outbreak in your school. Several classmates are absent, while some are still coming to school coughing and sneezing.</p> <p>(a) What immediate actions should the school take to prevent further spread?</p> <p>(b) If your classmate, who shares the bench with you, starts showing symptoms of the flu, how can you respond in a considerate way without being rude or hurtful?</p> <p>(c) How can you protect yourself and others from getting infected in this situation?</p>                                                                                                                                                                                                                                                                                                                                                                                                                              | 3 |
| 27                         | <p>What will happen to the two identical balloons as shown in Fig.? When water is filled into the bottle up to a certain height. Will both the balloons bulge? If yes, will they bulge equally? Explain your answer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3 |
| 28                         | There are two boats, A and B. Boat A has a base area of $7 \text{ m}^2$ , and 5 persons are seated in it. Boat B has a base area of $3.5 \text{ m}^2$ , and 3 persons are seating in it. If each person has a weight of 700 N, find out which boat will experience more pressure on its base and by how much?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3 |
| 29                         | Electric heating devices (like an electric heater or a stove) are often considered more convenient than traditional heating methods (like burning firewood or charcoal). Give any three reason(s) to support this statement considering societal impact                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3 |
| 30                         | <p>Answer the following:</p> <p>(a) Why is an electromagnet used in cranes instead of a permanent magnet?</p> <p>(b) What happens when the electric current is switched off?</p> <p>(c) Mention another any two situations where an electromagnet is preferred over a permanent magnet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3 |
| <b>SECTION-D (3x4 =12)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| 31                         | <p><b>Read the paragraph given below and answer the following questions:</b></p> <p>Riya's mother was preparing soft, spongy bhaturas and idlis for breakfast. She mixed a small amount of leftover curd and a pinch of yeast powder into the flour dough and kept it covered in a warm place for a few hours. Riya observed that the dough had risen to double its original volume and felt slightly warm and spongy. Later that afternoon, while gardening with her grandfather, she noticed her grandfather adding dried leaves and vegetable waste into a compost pit. Her grandfather explained that tiny, unseen organisms turn this waste into rich manure, which helps plants grow without needing synthetic fertilizers. Riya realized that not all tiny organisms are harmful; many act as our invisible helpers.</p> <p>(a) Which micro-organism is responsible for raising the dough in Riya's kitchen, and what</p> | 1 |

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|     | <p>gas does it produce during respiration?</p> <p>(b) Name the specific bacterium present in the curd.</p> <p>(c) How do the microorganisms in the compost pit help Riya's grandfather in farming? Explain with an example.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>1</p> <p>2</p>          |
| 32. | <p><b>Read the paragraph given below and answer the following questions:</b></p> <p>During a science laboratory activity, Riya is given three objects: a wooden block, an iron nail, and a sealed empty plastic bottle. She gently places them one by one into a large glass tub filled with water. She observes that the wooden block and the plastic bottle float on the water's surface, while the iron nail immediately sinks to the bottom. Her teacher explains that this phenomenon occurs due to the interaction between two specific forces acting on the objects when they are in the water.</p> <p>(a) What is the scientific term for the upward force exerted by a liquid on an object immersed in it?</p> <p>(b) Name the non-contact force that is responsible for pulling the iron nail downwards towards the bottom of the tub.</p> <p>(c) State the condition under which an object will float in a liquid, based on the forces acting on it. Apply this condition to explain why the wooden block floats.</p> | <p>1</p> <p>1</p> <p>2</p> |
| 33. | <p><b>Read the paragraph given below and answer the following questions:</b></p> <p>In a village, many people fell ill after drinking water from a pond. Symptoms included diarrhoea, stomach pain, and vomiting. On investigation, it was found that the pond water was contaminated with human waste. The health officer advised people to boil water before drinking and to construct proper toilets.</p> <p>(a) Name the disease that most likely spread in the village.</p> <p>(b) How did the disease spread?</p> <p>(c) Suggest two preventive measures that could stop such outbreaks in the future.</p>                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>1</p> <p>1</p> <p>2</p> |

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