 **SINDHI HIGH SCHOOL, BENGALURU**

**ANNUAL EXAMINATION (2024-25)**

**SUBJECT: SCIENCE**

**Class: VII Max Marks: 80**

**Date: 26/3/2025 Reading Time: 8:15am to 8:30am**

**No of Printed Sides: 05 Writing Time: 8:30 to 11:00 am**

**GENERAL INSTRUCTIONS:**

**i.** This question paper consists of 39 questions in 5 sections.

**ii.** All questions are compulsory. However, an internal choice is provided in some

questions.

**iii.** Section A consists of 20 objective-type questions carrying 1 mark each.

**iv.** Section B consists of 6 Very short answer type questions carrying 02 marks each.

Answers to these questions should be in the range of 30 to 50 words.

**v.** Section C consists of 7 Short Answer type questions carrying 03 marks each.

Answers to these questions should be in the range of 50 to 80 words.

**vi.** Section D consists of 3 Long Answer type questions carrying 05 marks each.

Answers to these questions should be in the range of 80 to 120 words.

**vii.** Section E consists of 3 source-based/case-based assessment units of 04 marks

each with sub-parts.

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|  | **Section A** |  |
|  | **Select and write the most appropriate option out of the four options given for each of the questions 1 – 20.** |  |
| 1 | Common name of dilute solution of acetic acid is\_\_\_\_\_\_\_\_.  a) Lime water b) Milk of magnesia c) Detergents d) Vinegar | **[1]** |
| 2 | Aluminium hydroxide and magnesium hydroxide tastes \_\_\_\_\_\_\_\_ because they are \_\_\_\_\_\_\_\_in nature.  a) Sour, acidic. b) Bitter, acidic  c) Salty, basic d) Bitter, basic | **[1]** |
| 3 | An inorganic substance present in sewage includes:  a) Nitrate and phosphates b) Phosphates and oxides  c) Carbonates and oxides d) Nitrate and carbonates | **[1]** |
| 4 | Air is pumped into clarified water to help:  a) Aerobic bacteria to grow b) Algal growth  c) Anaerobic bacteria to grow d) Fungus growth | **[1]** |
| 5 | During inspiration or inhalation, in lungs  a)  volume decreases, pressure increases  b) volume increases, pressure decreases  c) volume decreases, pressure decreases  d) volume increases, pressure increases | **[1]** |
| 6 | The chemical used to test the carbon dioxide gas in exhaled air is\_\_\_\_\_\_\_\_.  a) Lime juice b) Lime stone c) Lime water d) Quick lime | **[1]** |
| 7 | Which one of the following always carries oxygenated blood?  a) Blood capillaries b) Heart pump  c) Veins except the pulmonary vein d) Arteries except for pulmonary artery | **[1]** |
| 8 | Urine consists of:  a) 95% water, 5% urea b) 87.5% water, 3.5% urea  c) 97.5% water, 2.5% urea d) 95% water, 2.5% urea | **[1]** |
| 9 | A population of genetically identical individuals, obtained from asexual reproduction is\_\_\_\_\_\_\_\_.  a) Deme b) Callus c) Clone d) Aggregate | **[1]** |
| 10 | Lila observed that a pond with clear water was covered up with a green alga within a week. By which method of reproduction did the algae spread so rapidly?  a) Budding b) Fragmentation c) Binary Fission d) Vegetative propagation | **[1]** |
| 11 | Atomic number of Magnesium is  a)10 b) 12 C)15 d)18 | **[1]** |
| 12 | Light always travels in straight line. This property is called  a) Convergence of light b) Diversion of light  c) Dispersion of light d) Rectilinear propagation of light | **[1]** |
| 13 | Chemical formula of Calcium Hydroxide cam be represented as  a)CaOh b)Ca2OH c)Ca(OH)2 d)CaOH2 | **[1]** |
| 14 | Lightening of thunder is heard earlier than it sound because  a) Light travels faster than sound. b) Sound travels faster in air  c) Speed of light is less in air d) Light is slower than sound | **[1]** |
| 15 | A real image is formed when light coming from it meet after passing through a mirror or lens:  a) Meets opposite side of the mirror b) Meets at a point  c) Moves away from the source of light d) Meets the same side of the lens | **[1]** |
| 16 | In spectrum, the rays of light that bends least appear:  a) Middle of the spectrum b) On top of the spectrum  c) Anywhere in the spectrum d) Bottom of the spectrum | **[1]** |
|  | **Note: In the following questions 17 to 20, a statement of Assertion is followed by a statement of Reasoning. Choose the correct answer from the following options.**  **(a) Both assertion and reason are correct statements, and reason is the correct explanation for assertion.**  **(b) Both assertion and reason are correct statements, but reason is not the correct explanation for assertion.**  **(c) Assertion is correct, but reason is the wrong statement.**  **(d) Assertion is wrong, but reason is the correct statement.** |  |
| 17 | **Assertion (A):** The vascular tissue for the transport of water and nutrients in the plant is called the xylem.  **Reason (R):** The xylem forms a continuous network of channels that connects roots to the leaves through the stem and branches and thus transports water to the entire plant. | **[1]** |
| 18 | **Assertion (A):** Normally we take in air through our nostrils. When we inhale air, it passes through our nasal cavity into the windpipe.  **Reason (R):** Chest cavity is surrounded by ribs on the sides. A large, muscular sheet called alveoli forms the floor of the chest cavity. | **[1]** |
| 19 | **Assertion (A):** Image formed by concave lens is always virtual, erect and smaller than size of object.  **Reason (R):** Concave lens diverges the light rays. | **[1]** |
| 20 | **Assertion (A):** An object moving along a straight line with constant speed is said to be in uniform motion.  **Reason (R):** Every object moves with a constant speed. | **[1]** |
|  | **Section B** |  |
| 21 | Breathing rate of a person is not always constant. Give the reason for your answer. | **[2]** |
| 22 | **Observe the given figure carefully and answer the following questions.**    **(a) Which process is being tested in the activity?**  **(b) What is the result of the activity? Give reasons.** | **[2]** |
| 23 | The side mirror of a scooter got broken. The mechanic replaced it with a plane mirror. Mention any inconvenience that the driver of the scooter will face while using it and why? | **[2]** |
| 24 | Two different types of lenses is placed on a sheet of newspaper. How will you identify them without touching?  **OR**  Does a convex lens form only real images? Justify your answer with an example. | **[2]** |
| 25 | It takes me 12 minutes to reach my friend’s house from my house on a rickshaw. If the speed of the rickshaw is 3 m/s, calculate the distance between my house and my friend’s house. | **[2]** |
| 26 | What is sludge? Explain how it is treated. | **[2]** |
|  | **Section C** |  |
| 27 | Insects and leaves of a plant have pores through which they exchange gases with the atmosphere. Write down the differences between these pores with respect to their position, number, and extension into the body? | **[3]** |
| 28 | The atomic number of ‘X’ and ‘Y’ are 13 and 17, respectively. What will be the number of electrons in X3+ and Y–? Also identify X and Y. |  |
| 29 | Draw a diagram of human excretory system and label the various parts. | **[3]** |
| 30 | (a) An element ‘A’ has valency +2, while another element ‘B’ has valency -2. Give the formula of their compound formed when ‘A’ reacts with ‘B’.  (b)Helium atom has 2 electrons in its valence shell, but its valency is not 2. Explain. |  |
| 31 | (a)Define Pollination.  (b) Differentiate between self-pollination and cross pollination using a well labelled diagram  **OR**  Place a piece of bread in a moist and warm place for few days. Observe it after few days. What will you see? (a) Name the organism that grows on the bread piece? (b) What are the thread-like projections called? (c) What is the knob like structure present on the top of thin stem called? (d) Which type of reproduction does this organism shows?  (e)Draw a diagram representing the organism mentioned in ‘a’ and label ‘b’& ‘c’ on it. | **[3]** |
| 32 | (a)Define i) Oscillation ii) Time period of a pendulum.  (b)A simple pendulum takes 32s to complete 20 oscillations. What is the time period of the pendulum? | **[3]** |
| 33 | imageYou are provided with three test tubes A, B, and C as shown in Figure with different liquids. What will you observe when you put  (a) a piece of blue litmus paper in each test tube.  (b)a piece of red litmus paper in each test tube.  (c)a few drops of Chine rose solution to each test  tube. | **[3]** |
|  | **Section D** |  |
| 34 | (a)Are regeneration and fragmentation the same? Explain with examples.  (b)In the diagram given below, label the parts marked (a), (b), and (c)    **OR**  Sketch a flower and label the parts whose functions are given below and give their names.  (a)The part which contains pollen grains.  (b)The part where the female gamete is formed.  (c)The female reproductive part where pollen grain germinates.  (d) The colourful part of flower which attracts insects. | **[5]** |
| 35 | Laura goes for a cycle from her house to the post office, 4km away. Observe the given graph and answer the following question regarding her journey.  (a) How long did it take Laura to cycle to the post office?  (b) Work out Laura’s speed cycling to the post office.  (c) How long did Laura spend at the post office?  (d) How long did it take Laura to cycle to home?  (e) Work out Laura’s speed cycling back home.  **OR**  (a) **Show the shape of the distance-time graph for the motion in the following cases: (i) A car moving with a constant speed. (ii) A car parked on a side road.**  (b)The odometer of a car reads 57321.0 km when the clock shows the time 08:30 am. What is the distance moved by the car, if at 08:50 am, the odometer reading has changed to 57336.0 km? Calculate the speed of the car in km/min during this time. Express the speed in km/h also. | **[5]** |
| 36 | Sonal and Sumiti were provided with test tube A and B respectively. Both containing a transparent solution. Sonal added 2 drops of indicator ‘X’ in her test tube and got dark pink colour. Sumiti added 2 drops of indicator ‘X’ to her test tube but could not get any change in colour. Later, when both solutions were mixed, the pink colour of test tube ‘A’ disappeared.  a) Identify A, B and X  b) Suggest the possible cause for the variation in their results.  c) Which chemical reaction caused disappearance of pink colour?  **OR**  a) Inder is suffering from indigestion due to acidity. Is it advisable to give him orange juice in this situation? Justify.  b) Ramesh was playing with his friends in the garden. Suddenly, he was stung by a honeybee and was in great pain. Immediately, his friends called his mother. She applied baking soda paste on the affected area and then took him to the doctor. (i) What could be the reason for this burning pain? (ii) Why did his mother apply baking soda solution on the affected area?  iii) What is the chemical name and chemical formula of baking soda? | **[5]** |
|  | **SECTION-E** |  |
| 37 | While riding a bike, Mason fell from it due to loss of balance. He got up and realized that he was bleeding from several wounds badly. He panicked and started to run but Mansi who was looking at him, stopped him and told him to clean his wound with a clean cloth and that blood will stop coming in a while. Mason noticed that he has stopped bleeding after some time and a hard covering was appearing on his wounds.  (a)Why did the bleeding stop after a while?  (b) Name the liquid matrix of the blood. Also mention the function of WBC’s present in it.  (c) What causes the red pigment in blood? | **[4]** |
| 38 | Namit was driving a car and suddenly became aware of a loud sound coming from behind. He looked through his rear-view mirror and saw an ambulance. He recalled reading that such emergency vehicles often have their name written in the mirror (AMBULANCE) or writing, i. e. Light Class 7 Extra Questions Science Chapter 15 8 He quickly made way for the ambulance, murmuring a quick prayer for the speedy recovery of the patient inside the ambulance.  (a)Why was the word AMBULANCE written as Light Class 7 Extra Questions Science Chapter 15 8?  (b)Gaurav is standing at 10m from a plane mirror. He moved 2m away from it. What will be the distance between him and his image?  (c)What is the nature of image formed by a plane mirror? | **[4]** |
| 39 | One day Sachin had gone to his uncle who lives in a village. He saw there many people defecate in an open area because proper toilet facilities are not there. He wondered about the groundwater contamination, as he studied in his class that this act may cause water-borne diseases. He convinced village people to make toilets to avoid such an outbreak of water-borne diseases. (a) Name two water-borne diseases. (b) What is a vermi-composting toilet?  (c)Write the name of sewage which can be used in the following conditions.  (i) The toilet which is used in aeroplane during flight.  (ii)A toilet which can be used in some outdoor gathering. | **[4]** |

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