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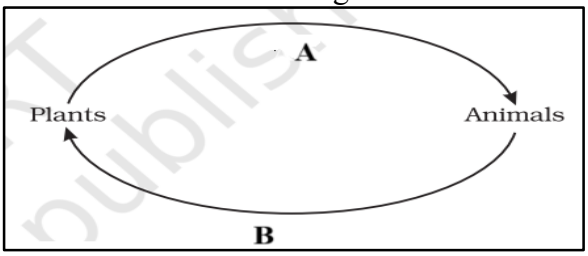
Class: VII
Annual Examination (2024-25)
CHEMISTRY
Marking Scheme : Set C1/C2

Q1	MCQ: (i) The following chemical equation is an example of _____ process. Hydrochloric acid + Sodium hydroxide → Sodium chloride + Water HCl + NaOH → NaCl + H2O (a) Crystallisation **(b) Neutralisation** (c) Rusting (d) Physical change (ii) Liquified petroleum gas (LPG) is a common fuel. In the cylinder it is stored as a liquid. When the knob of the burner is switched on a gas comes out from the burner (Change - A) then it burns when a burning matchstick is brought near to the burner(Change - B). Choose the correct statement from the following: (a) A is a chemical change & B is a physical change . (b) **A is a physical change & B is a chemical change.** (c) Both processes A and B are chemical changes. (d) Both processes A and B are physical changes. (iii) To improve sanitation, low cost onsite sewage disposal systems are being encouraged. Some of the examples are: (a) Septic tanks (b) Chemical toilets (c) Composting pits. **(d) All of above**	1*3
Q 2	**Assertion (A):** Walking over the dead leaf layer on the forest floor is like walking over a warm spongy carpet. **Reason (R):** The decomposition of organic matter releases heat. This process also creates a soft and dark organic matter. **Ans: (a) Both A and R are correct and R is the correct explanation of A**	1
Q 3	SET 1 (a) Ekam got his soil tested in a laboratory, he was informed that the soil in his farm is acidic. Explain what he should do? **Ans: (a) When the soil is too acidic, it is treated with bases like quick lime (calcium oxide) or slaked lime (calcium hydroxide).** (b) Complete the table:	2

	<table><tr><th>Substance</th><th>Acid/Base</th></tr><tr><td>Curd</td><td>Lactic acid</td></tr><tr><td>Window cleaner</td><td>Ammonium hydroxide</td></tr></table> **SET 2** (a) Ekam got skin rashes due to an ant bite. Suggest what should be applied on the rashes. Explain. **Ans: (a) Ant bites injects formic acids in our skin so, calamine solution should be applied on the bite to neutralise the effect of the acid.** (b) Complete the table: <table><tr><th>Substance</th><th>Acid/Base</th></tr><tr><td>Tamarind</td><td>Tartaric acid</td></tr><tr><td>Magnesium hydroxide</td><td>Milk of magnesia</td></tr></table>	
Q 4	Match the following: <table><tr><td>(a) Activated sludge</td><td>(i) Chlorine and ozone **(b)**</td></tr><tr><td>(b) Disinfect water</td><td>(ii) Cholera, Typhoid, Polio **(c)**</td></tr><tr><td>(c) Water borne disease</td><td>(iii) A pipe carrying sewage **(d)**</td></tr><tr><td>(d) Sewer</td><td>(iv) Contains 97% water (**a)**</td></tr></table> OR State what is the function of: (a) Grit and sand removal tank **This tank allows sand, grit and pebbles to settle down and hence be removed from waste water.** (b) Bar screens **Wastewater is passed through bar screens. Large objects like rags, sticks, cans, plastic packets, and napkins are removed.**	2
Q 5	(a) Why should oils and fats be not released in the drain? Explain (b) Good sanitation prevents disease. Explain. (c) Explain why it is harmful to discharge untreated sewage into rivers or seas. **Ans: Cooking oil and fats should not be thrown down the drain. They can harden and block the pipes. In an open drain the fats clog the soil pores reducing its effectiveness in filtering water.**	3

	(b) Good sanitation prevents disease" means that by practicing proper hygiene and waste disposal methods, like using clean toilets, washing hands regularly, and accessing clean drinking water, we can significantly reduce the spread of diseases. **(c) Ans. It is harmful to discharge untreated sewage into rivers or seas because it can pollute the whole source of water. Sewage contains harmful substances and disease causing organisms.**	
Q 6	Properties such as shape, size, colour and state of a substance are called its physical properties. A change in which a substance undergoes a change in its physical properties is called a physical change. A physical change is generally reversible. In such a change no new substance is formed. A chemical change on the other hand is an irreversible change and there is a change in chemical properties of the substance. (a) What is the chemical name of neela thotha? **Ans: Copper sulphate** (b) When a candle burns, both physical and chemical changes take place. Identify these changes. ● **Melting of wax - Physical change, A change in state (physical property)** ● **Burning of wax - Chemical change, A new substance is formed and heat and light is produced.** (c) Write a word equation of process when an iron nail is added into copper sulphate solution. What is the type of change? **Ans: Copper Sulphate + Iron → Iron sulphate + copper** **Chemical change** OR (c) Write 2 observations made during burning of magnesium ribbon? What type of change is it? Explain. **Ans: Magnesium (Mg) + Oxygen (O_2) → Magnesium oxide (MgO)** ● **Magnesium ribbon burns with dazzling white flame.** ● **A white ash is formed after the change.** **Since a new substance magnesium oxide is formed, It is a chemical change.**	4
Q 7	(a) Observe the flow diagram given below and identify 'A' & 'B'. State what is the role of plants and animals in maintaining the balance between 'A' & 'B'. (2)  **Ans: A - Oxygen gas B - Carbon dioxide gas** **Forests are called green lungs of earth. Plants release oxygen through the process of photosynthesis. Thus plants help to provide oxygen for animal respiration. They also maintain the balance of oxygen and carbon dioxide in the atmosphere.** (b) What is humus? What is its importance to the soil?	2,2,1

Ans: Decomposers and microorganisms feed upon the dead plant and animal tissues and convert them into a dark coloured substance called humus. It releases the nutrients of dead plants and animals back to the soil and makes it fertile.

(c) Write the correct sequence of given organisms to form a food chain.

Eagle, Grass, Snake, Insects, Frog

Ans: Grass → Insects → Frog → Snake → Eagle.

OR

(a) Identify the layers A and B in a forest as shown in the above image.

Ans: A- Canopy B- Understory

(b) Explain how forests prevent floods.

Ans: Forest is a natural absorber of rain water. It allows rainwater to seep through. The roots of the trees absorb the water and prevent it from flowing away. The trees present in the forest prevents the rain from directly hitting the ground which may result in floods. It rather hits the ground slowly. Hence, trees in the forest slow down the movement of running water and thus help in preventing floods.

(c) Name the useful products obtained from the following:

Sandalwood tree	**Oil**
Babool tree	**Gum**
Neem tree	**Medicine and timber**
Sheesham tree	**Timber**

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