Delhi Public School, Howrah

PERIODIC ASSESSMENT I (2024-2025)

Class-VIII

Care must be taken not to write anything on the question paper. All the questions must be attempted in the correct sequence.

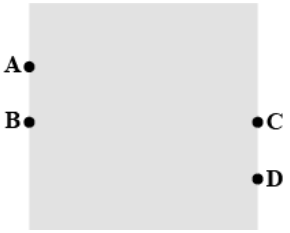
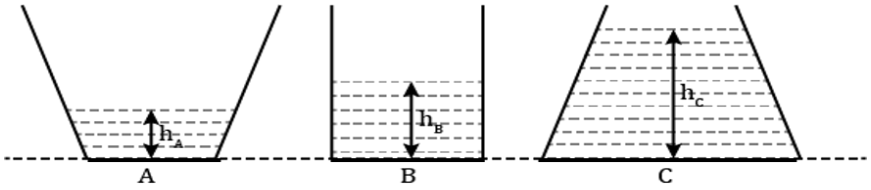
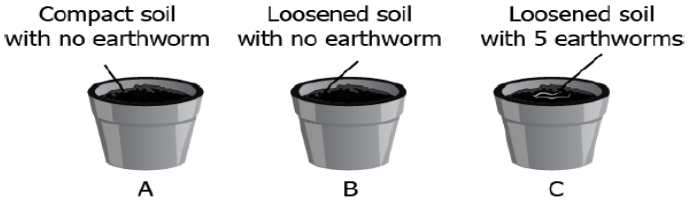
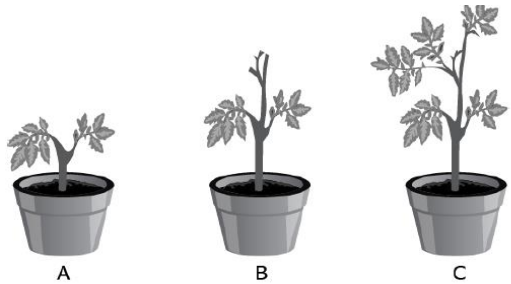
Subject:- Science

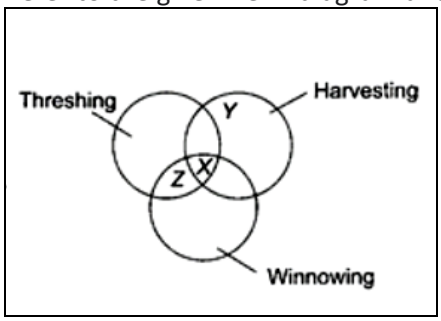
Time:-1.5 Hours **F.M.-40**

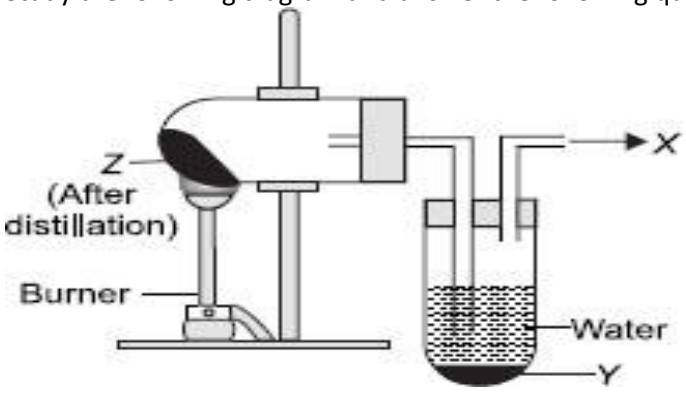
General Instructions:

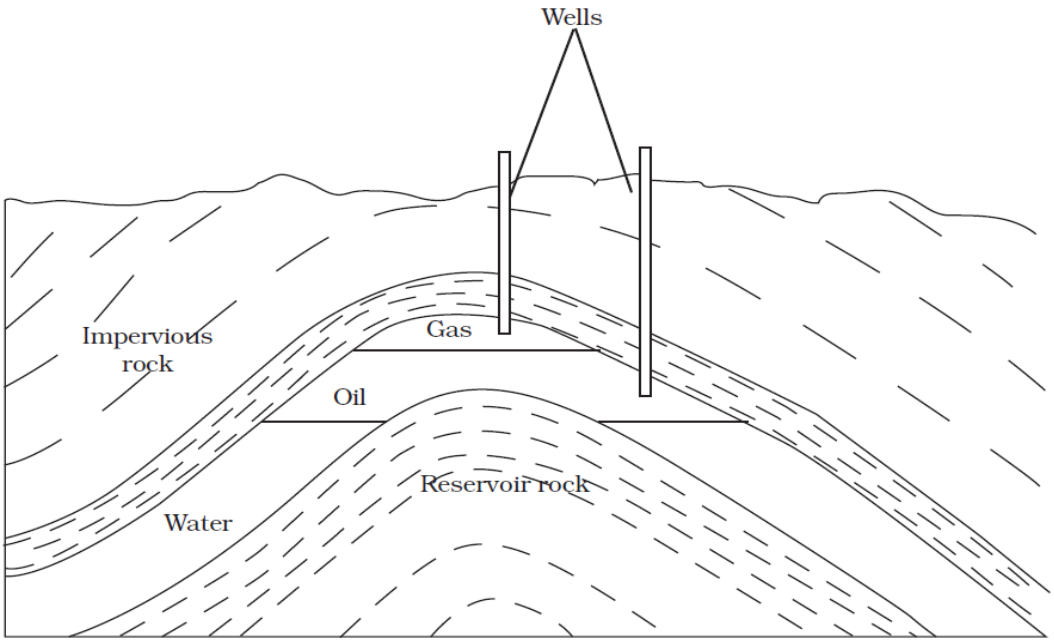
i. **This question paper consists of 25 questions in 4 sections.**
ii. **All questions are compulsory.**
iii. **Section A consists of 14 objective type questions carrying 01 marks each.**
iv. **Section B consists of 6 Very Short questions carrying 01 or 02 marks each. Answers to these questions should be in the range of 30 to 50 words.**
v. **Section C consists of 4 Short Answer type questions carrying 03 marks each. Answers to these questions should in the range of 50 to 80 words.**
vi. **Section D consists of 1 source-based/case-based units of assessment of 04 marks each with sub-parts.**

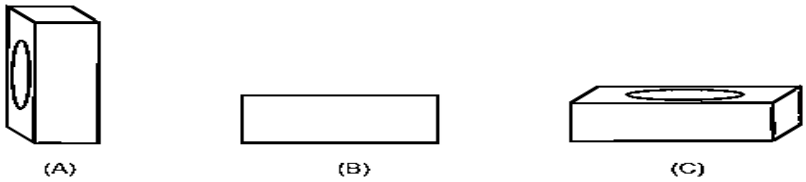
Q. No.	**SECTION A** Select and write one most appropriate option out of four options given for each of the questions 1–20	**Marks**
1.	Which of the followings is/are petrochemicals? a. Polyester b. Coal tar c. Natural gas d. Coke	**1**
2.	If 1 kg coal and 1 kg coke are burned then which one will give more heat energy? a. 1 kg coal as it has higher percentage of carbon b. 1 kg coke as it has higher percentage of carbon c. 1 kg coal as it is the purest form of carbon d. Both will give same amount of heat energy	**1**
3.	What is the correct set of substances that can be used for road surfacing? a. Coke, Bitumen b. Coal tar, Paraffin wax c. Coal tar, Bitumen d. Coke, Paraffin wax	**1**
4.	Nowadays CNG is preferred as a fuel for the vehicles over the petroleum-based fuels. What is the reason behind this? a. CNG is a renewable energy source and has unlimited supply in nature b. Petroleum based fuels are not available nowadays c. CNG can be manufactured easily d. CNG is a much cleaner fuel and causes less pollution	**1**

5.	A boy is pulling a cart by a force of 100 N. The frictional force experienced by the cart is 20 N. The net force that causing the motion of the cart is- a. 100 N b. 120 N c. 80 N d. 5 N	**1**
6.	A water tank has four taps fixed at points A, B, C, D as shown in the figure below. The water will flow out at the same pressure from taps at-  a. B and C b. A and C c. A and B d. C and D	**1**
7.	The three vessels shown in figure have same base area. Equal volumes of a liquid are poured into the three vessels. The force on the base will be-  a. Maximum in vessel A b. Maximum in vessel B c. Maximum in vessel C d. Equal in all the vessels	**1**
8.	A student setup an experiment to study the growth of plants using three different soiltype.  The student plants a bean seed in each of the three pots. After 2 months, the student observes the growth of the plants as shown.  What can be student conclude from this experiment?	

	a. Earthworm increases the fertility of the soil b. Compact soil increases the amount of nutrients in the soil c. Earthworm restrict the growth of the plant by consuming them d. Loosed soil with no earthworm allows maximum growth of the plant	
9.	A student takes 2 pots M and N. He puts plant waste in pot M and plastic products in pot N. He places both the pots in an open area for 3- 4 weeks and observes that the content in the Pot M is converted into manure while the content in the Pot N remains the same. What can be a likely reason for the production of manure in pot M? a. Microorganisms decompose plant waste faster than plastic b. Microorganisms degrade plastic slowly compared to plant waste c. Microorganisms only degrade plastic waste to produce manure d. Microorganisms only decompose plant waste into manure	**1**
10.	Refer to the given Venn diagram and identify X, Y and Z.  a. X-Combine Y-Thresher Z-Sickle b. X-Combine Y-Sickle Z-Thresher c. X-Harvester Y-Sickle Z-Trowel d. X-Sickle Y-Trowel Z-Harrow	**1**
11.	**Read the given passage and select the correct option for X and Y.** Microorganisms are used for the large-scale production of alcohol, wine and acetic acid. X is used for commercial production of alcohol and wine. The process of conversion of sugar into alcohol is known as Y. a. X: *Streptococcus*; Y: Aerobic respiration b. X*: Saccharomyces* Y: Fermentation c. X: *Lactobacillus*; Y : Fermentation d. X: *Saccharomyces*; Y: Aerobic respiration	**1**
	Q. no 12 to 14 are Assertion - Reasoning based questions. **These consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:** **a. Both A and R are true and R is the correct explanation of A** **b. Both A and R are true and R is not the correct explanation of A** **c. A is true but R is false** **d. A is False but R is true**	
12.	**Assertion (A):** The pressure at the bottom of the sea is less than that near the surface. **Reason(R)**: The pressure exerted by a liquid depends upon the depth of the liquid and density of the liquid.	**1**
13.	**Assertion (A):** Forest, minerals, natural gas are inexhaustible natural resources. **Reason (R):** The natural resources that cannot exhausted by human activities are called inexhaustible natural resources.	**1**

14.	**Assertion (A):** Before storing, the harvested grains are properly dried in the sun to reduce the moisture in them. This prevents the attack by insect pests, bacteria and fungi. **Reason (R):** Harvested grains have more moisture. If freshly harvested grains (seeds) are stored without drying, they may get spoilt or attacked by organisms, making them unfit for use or for germination.	**1**
	SECTION B Q. no. 15 to 20 are very short answer questions.	
15	How do the irrigation requirements of a wheat crop differ from that of a paddy crop?	**1**
16	Trash can contain the following materials.  **• Plastic straw • Aluminium foil • Tissue paper • Glass bottles • Chicken bones** Select the materials from the above list that can be decomposed by microbes.	**1**
17.	Given below is an image. Study it and answer the following questions:  a. What is X and Y? b. Identify the process. c. Give one importance of it.	**2**
18.	Study the following diagram and answer the following questions. 	**2**

	a. Identify the process. b. What are X, Y, and Z?	
19.	What will happen to 'A- pooris' and 'B- unused kneaded flour' if they are left in the open for a day or two? A-  B- 	**2**
20.	Identify the kind of force acting in the following situations. i. A coin or a pen falls to the ground when it slips out of your hand. ii. A boat comes to rest if we stop rowing it. iii. When a person hammers a nail. iv. A nail sticking to a magnet.	**2**
	SECTION-C Q.no. 21 to 25 are long answer questions.	
21.	Given below is the diagram for extraction of petroleum and natural gas. Study it and answer the following questions.  a. Why do both the petroleum and natural gas float on water? b. Natural gas is obtained along with petroleum. So, can it be also called petroleum gas? Justify your answer. c. In the diagram it is observed that petroleum is extracted using oil well. After extraction why can it be not directly used as a fuel?	**(1+1+1) = 3**

22.	a. Draw the diagram of the protozoa which has slipper shaped and commonly found in water. b. Sima is wondering why teacher keeps telling them not to let water collect anywhere in the neighbourhood. Give suitable explanation for the statement. c. Identify the disease as shown in the given picture. 	**1.5+1 +0.5 = 3**
23.	A brick weighing 20 N and having dimensions 25 cm × 10 cm × 5 cm is kept on the ground in three different ways. Calculate its pressure in the three cases.  (A) (B) (C)	**3**
24.	A black coloured substance that is hard and porous is heated separately. When it is heated in presence of air it produces a gas 'A' that can turn lime water milky. When it is heated in absence of air it produces a gas 'B' along with another substance 'C'. 'C' can react with steam to produce a mixture of carbon monoxide and hydrogen gas that is also known as 'D'. a. Identify 'A', 'B', 'C', and 'D'. b. Write down any two uses of coal tar.	**(2+1) = 3**
	SECTION-D Q.no. 25 is case - based/data -based questions with 2 to 3 short sub - parts.	
25.	**Read the passage and answer the following questions:** Pressure is the force exerted per unit area on an object, in a direction perpendicular to the surface. In other words, we can say, the amount of force that presses on a certain area is known as pressure. The unit of pressure is Pascal (Pa) in the International System of Units (SI). It is named after the scientist Blaise Pascal. One Pascal is equivalent to one Newton (1N) of force applied over an area of one metre square ($1m^2$). The pressure exerted by liquids is called liquid pressure, whereas the pressure exerted by the weight of the air column on the surface of earth is called atmospheric pressure. i. How regelation helps in ice skating? ii. We know that there is a huge amount of atmospheric pressure on us. But we do not experience its effect. why? **OR** High blood pressure patients are not advised to go to hill stations. Give reason.	**4**