

INDIAN SCHOOL SOHAR PERIODIC TEST I (2024-25) SUBJECT: SCIENCE

SET II

MAX. MARKS: 20 TIME: 40 MINUTES

CLASS: X DATE:21/05/2024

General Instructions:

- i. This question paper consists of 9 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. Student is expected to attempt only one of these questions.
- iii. Section A consists of four objective type questions carrying 1 mark each.
- iv. Section B consists of two very short type questions carrying 02 marks each.
- v. Section C consists of one short answer type question carrying 03 marks.
- vi. Section D consists of one descriptive type question carrying 05 marks.
- vii. Section E consists of one case-based question carrying 04 marks with sub-parts.

Select	SECTION – A and write the most appropriate option out of the four options given for each of the questions 1	to 4		
Q.No				
1	An object is placed in front of a convex mirror at infinity. According to the New Cartesian Sign Convention, the sign of focal length and the sign of the image distance in this case are respectively: (a) +,- (b) -, + (c) -, - (d) +, +	1		
2	 The following reactions is used for the preparation of oxygen gas in the laboratory : 2KCIO₃ (s) → Heat → 2KCI (s) + 3O₂(g) Which of the following statement is correct about the reaction? (a) It is a decomposition reaction and endothermic in nature. (b) It is a combination reaction. (c) It is a decomposition reaction and accompanied by release of heat. (d) It is a photochemical decomposition reaction and exothermic in nature. 			
These appro (a) Bo (b) Bo (c) A	3 and 4 are Assertion - Reasoning based questions. consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the priate option given below: oth A and R are true and R is the correct explanation of A oth A and R are true and R is not the correct explanation of A is true but R is false is false but R is true	e		
3	Assertion (A): Anaerobic respiration is more efficient in terms of energy release than aerobic respiration. Reason(R) : Conversion of glucose to pyruvate takes place in the cell cytoplasm.	1		
4	 Assertion (A): Magnesium ribbon keeps on burning in atmosphere of oxygen. Reason (R) : Magnesium reacts with oxygen to form magnesium oxide and this reaction is a combination reaction. 	1		
	SECTION – B	1		
5	 Give reason for the following: (a) At night, CO₂ elimination is the major exchange activity going on in plants whereas during the day, oxygen release is the major event. (b) Maximum absorption of nutrients occurs through small intestine. 	2		

6	(a) Balance the follo	wing chemical equat	tion:	2		
	$AIBr_3 + K_2SO_4 \rightarrow KBr + AI_2(SO_4)_3$					
	(b) Identify the agents in the following reactions:					
	(i) $4NH_3 + 5O_2 \rightarrow$	4NO + 6H ₂ O (reducir	ng agent)			
	(ii) $Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$ (oxidising agent)					
		SECT	ION – C			
7	(a) A student took sodium sulphate solution in a test tube and added barium chloride solution			3		
	to it. He observed that an insoluble substance had formed. Mention the name and colour of the substance formed.					
			hat takes place when quicklime is added to water. n for the above reaction.			
		SECT	TION-D			
8	(a) Find the magnification of the image formed by a spherical mirror from the following data : $u = -20$ cm , f = -15cm					
	(b) How far is the image from its object?					
	(c) Draw a ray diagram to show the image formation in this case.					
		SECT	ION – E	•		
9	The table below shows the composition of inhaled and exhaled air					
	Gas	Inhaled air	Exhaled air			
	Oxygen	20.84%	15.7%			
	Carbon dioxide	0.04%	3.6%			
	(a)Why does the exhaled air contain more carbon dioxide than the inhaled air?					
	(b)How is carbon dioxide transported in our body?					
	(c) Briefly explain how diaphragm helps in the process of breathing.					
			OR			
	(c)Why does diffusio respiratory system		in the alveolar region and not in other parts of the			