



SECOND TERM SAMPLE PRACTICE PAPER CHEMISTRY

Time : 1:30 Hrs

STD IX

Score : 40

Answer any 4 questions from 1 to 5. Each question carries 1 score. (4 x 1 =4)

1. The number of outermost electrons of nitrogen is five. In which group is it found? (1, 5, 7, 15) 1
2. The energy released when an atom is converted into an ion by adding an electron is called ----- (Ionisation energy, electron gain enthalpy, ionisation enthalpy, ionisation) 1
3. $Mg + F_2 \rightarrow MgF_2$ 1
- This is a reaction in which magnesium fluoride is produced.
Which is the oxidising agent in this chemical reaction?
(Mg, F_2 , MgF_2 , None of these)
4. Which gas is produced when ammonium chloride and sodium hydroxide react? 1
5. What is the solute in sodawater? 1

Answer any 4 questions from 6 to 10. Each question carries 2 score. (4 x 2 =8)

6. The electron configuration of four elements are given (symbols are not real)
- | | |
|----------|-------------|
| A – 2, 3 | C – 2, 7 |
| B – 2, 1 | D – 2, 8, 8 |
- a) Which of these one is a noble gas? 1
- b) Which of these elements belongs to the third period? 1
7. Select and write the anions and cations from those given in the table.
- | |
|---|
| Na^+ , Cl^- , Ca^{2+} , Mg^{2+} , O^{2-} , He |
|---|
8. Balance the chemical equation. 2
- $$Al + O_2 \rightarrow Al_2O_3$$
9. Equal volumes of dilute hydrochloric acid are taken in three test tubes. In each of the three, pieces of copper (Cu), zinc (Zn) and magnesium (Mg) of the same size are placed
- a) In which test tube will the chemical reaction rate be higher? 1
- b) What will be the change in the chemical reaction rate if a little water is added to it? 1
10. With the help of the table given below, draw the electron dot diagram of the formation of magnesium oxide. 2

Element	Atomic number	Electron configuration
Magnesium	12	2,8,2
Oxygen	8	2,6

Answer any 4 questions from 11 to 15. Each question carries 3 score. (4 x 3 =12)

11. a) What is the oxidation number of oxygen in O_2 ? 1
- b) Oxidation number of hydrogen (H) in H_2SO_4 is +1 and the oxidation state of oxygen (O) is -2 2
12. In the equation for the formation of sodium chloride by combining sodium and chlorine
- a) Oxidation half equation 1
- b) Reduction half equation 1

c) The equation for the formation of sodium chloride (NaCl) by combining ions 1

13.



As shown in the figure, if manganese dioxide (MnO_2) is added to a hydrogen peroxide (H_2O_2) solution taken in a boiling tube and a burning incense stick is held above it, it will be seen to glow brightly.

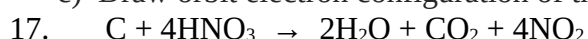
- a) Which gas is produced in a boiling tube? 1
- b) How is known of MnO_2 , that does not undergo chemical change permanently? 1
- c) Name the enzyme that accelerated converting starch into maltose. 1

14. Write method of preparation of saturated, unsaturated, and supersaturated solutions of ammonium chloride (NH_4Cl). 3

15. Write any three characteristics of ionic compounds. 3

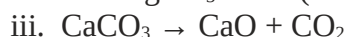
Answer any 4 questions from 16 to 20. Each question carries 4 scores . (4 x 4 =16)

- 16. a) Find the atomic number and mass number of element ${}^{11}_5\text{B}$. 1
- b) Find the number of protons and neutrons present in it. 1
- c) Draw orbit electron configuration of this atom. 2



- a) Write the oxidation number of carbon in the reactant and the product in this chemical equation. 1
- b) Did carbon undergo oxidation or reduction? 1
- c) Which is the oxidising agent in this chemical reaction? 1
- d) Which is the reducing agent? 1

18. Tabulate the following reactions in to Combination reaction, Decomposition reaction, Double decomposition reaction, Displacement reaction. 4

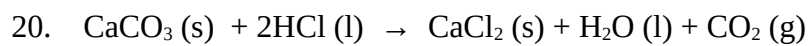


19. From the table below, write the chemical formula of 4 salts that contain a negative ion in the acid and a positive ion in the base. 4

Na^+	Ca^{2+} ,	OH^- ,	SO_4^{2-}
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SAMAGRA PLUS



a) In this reaction when temperature increases rate of reaction increases. Why?

2

b) Write any other two methods to increase the the rate of reactions.

2



Scoring Key

Second Terminal Exam CHEMISTRY

Q No	S Q NO	Key point	Score	Total
1	-	15	1	1
2	-	electron gain enthalpy	1	1
3	-	F ₂	1	1
4	-	ammonia	1	1
5	-	CO ₂	1	1
Max 4 Score				
6	a	D – 2, 8, 8	1	2
	b	D- 2, 8, 8	1	
7		Anaions- Cl ⁻ , O ²⁻	½+ ½	2
		Cataion - Na ⁺ , Mg ⁺	½+ ½	
8		4Al + 3O ₂ → 2Al ₂ O ₃		2
9	a	Mg	1	2
	b	Decreases	1	
10		$\begin{array}{c} \overset{\cdot\cdot}{\text{Mg}} \\ (2, 8, 2) \end{array} + \begin{array}{c} \text{:}\ddot{\text{O}}\text{:} \\ (2, 6) \end{array} \longrightarrow \begin{array}{c} \boxed{\text{Mg}}^{2+} \\ (2, 8) \end{array} \begin{array}{c} \boxed{\text{:}\ddot{\text{O}}\text{:}}^{2-} \\ (2, 8) \end{array}$		2
Max 8 Score				
11	a	0	1	3
	b	6	2	
12	a	Mg → Mg ⁺ + 2e ⁻	1	3
	b	O + 2e ⁻ → O ²⁻	1	
	c	Mg ⁺ + O ²⁻ → MgO	1	
13	a	Oxygen	1	3
	b	catalyst	1	
	c	Amylase	1	
14		Method of preparing solutions	3	3
15		Ionic compounds are generally soluble in polar solvents such as water.	3	3
		They are non volatile and hard.		
		They exist as crystals in solid state.		
	Generally, they have high melting points and boiling points.			
	Ionic compounds are not conductors of electricity in solid state, they conduct electricity in molten and aqueous states.			
	ANY THREE			
Max 12 Score				

16	a	Mass number -11 & Atomic number - 5	$\frac{1}{2} + \frac{1}{2}$	4
	b	Protons – 5 & neutrons -6	$\frac{1}{2} + \frac{1}{2}$	
	c	orbit electron digram	2	
17	a	oxidation number of carbon in the reactant - 0 oxidation number of carbon in the product - 4	$\frac{1}{2} + \frac{1}{2}$	4
	b	oxidation	1	
	c	HNO ₃	1	
	d	C	1	
18		Combination reaction, - ii	4	4
		Decomposition reaction -iii		
		Double decomposition reaction - iv		
		Displacement reaction - i		
19		1- NaOH	4	4
		2 -CaSO ₄		
		3- Na ₂ SO ₄		
		4 -Ca(OH) ₂		
20	a	i. Reactants are heated, the kinetic energy of the particles increases. ii. That is, as the temperature increases, the number of particles that attain the threshold energy increases, and as a result, the number of effective collisions increases leading to an increase in the rate of reaction.	1 +1	4
	b	i. Inceze the tempere	1 +1	
		ii. Powder CaCO ₃		

Max 16 Score