9TH STD MODEL EXAMINATION

CHEMISTRY

Time : 1 ½ Hours **Score : 40**

Instructions

- First 15 minutes is given as cool off time. This time is to be spent for reading and understanding the questions.
- Answer the questions according to the directions.
- Score and time are to be considered while answering.

Answer any 4 questions from 1 to 5. Each carries 1 Score. **(4 X 1= 4)**

1. Which among the following oxides is an acidic oxide? **[1]**

   (Na_2O, K_2O, MgO, SO_2)

2. Write the chemical name of caustic soda. **[1]**

3. Actinoides belong to the _____ period of the periodic table. **[1]**

4. Which is the most abundant gas in the atmosphere? **[1]**

5. Find the relation and fill up. **[1]**

   Washing soda : Sodium carbonate

   Baking soda : _ _ _ _ _ _ _ _ _ _ _ _

Answer any 4 questions from 6 to 10. Each carries 2 Scores. **(4 × 2 = 8)**

6. Write the correct statements from the following. **[2]**

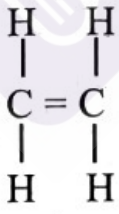
a) As the size of atom increases, the ionisation energy increases.

b) As the size of atom decreases, electronegativity increases.

c) As the atomic size increases, metallic character increases.

d) On moving from left to right in a period, atomic size increases.

7. Structural formula of a hydrocarbon is given.



a) Which is the type of covalant bond between the two carbon atoms in this compound? **[1]**

b) What are hydrocarbons? **[1]**

8. Analyse the isotopes given below and answer the following questions.

Carbon - 14, Protium, Deuterium, Phosphorous - 31

a) Which isotope is used to determine the age of fossils? **[1]**

b) Which isotope of hydrogen is used in atomic reactors? **[1]**

9. Write any two advantages of Mendeleev's periodic table. **[2]**

10. A small quantity of sodium chloride solution is taken in a test tube. One drop of silver nitrate solution is added to this.

a) What do you observe?

b) $NaCl + AgNO_3 \rightarrow$ 'X'+ $NaNO_3$ **[1]**

Write the name of the compound 'X'. **[1]**

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

11. Atomic number of an element Y is 16 (Symbol is not real).

a) Write the electronic configuration of this element. **[1]**

b) To which period does this element belong? **[1]**

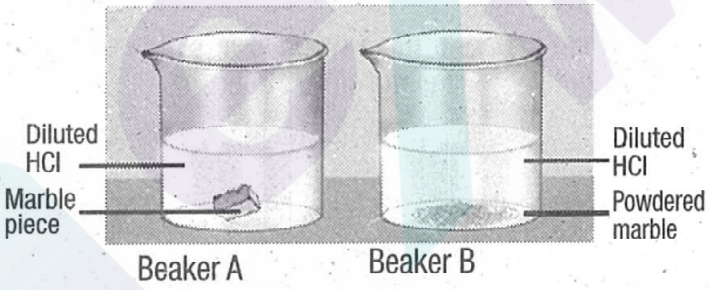
c) To which family of elements does this element belong? **[1]**

12. Atomic number of an element is 17 and its mass number is 35.

a) Find out the number of protons and neutrons in this atom.

b) Draw the Bohr model of this atom

13. Analyse the figure given below and answer the following questions.



(a) In which beaker the rate of reaction is greater? **[1]**

(b) Which is the factor that influenced the rate of chemical reaction here? **[1]**

(c) Suggest any other method to increase the rate of this reaction. **[1]**

14. Some substances and their P^H values are given.

Substance	P^H Value
P	2
Q	13
R	7
S	5

a) Which one of these turns red litmus blue? **[1]**

b) Which substance is the most acidic? **[1]**

c) Which of these substances is, neutral? **[1]**

15. a) What are the chemicals required to prepare hydrogen in laboratory? **[1]**

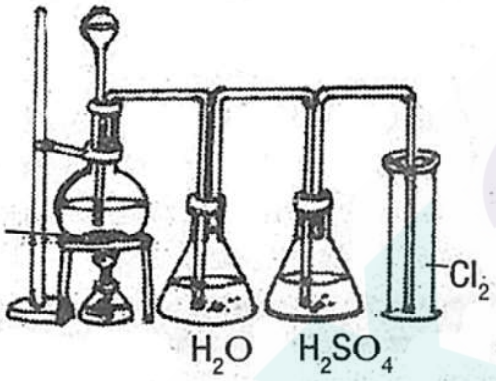
b) Write the balanced chemical equation of this reaction. **[1]**

c) Which type of reaction is this? **[1]**

(Decomposition, Combination, Displacement, Double decomposition)

Answer any 4 questions from 16 to 20. Each carries 4 scores **(4 × 4 =16)**

16. Analyse the figure showing the laboratory preparation of chlorine gas and answer the following questions.



a) Which are the chemicals used for the preparation of chlorine gas in the laboratory? **[1]**

b) Chlorine gas is passed through water. Why? **[1]**

c) Chlorine gas is passed through concentrated sulphuric acid. Why? **[1]**

d) How is bleaching powder prepared? **[1]**

17. Carbon monoxide and Carbon dioxide are two compounds formed by the combination of carbon and oxygen.

a) Write the balanced chemical equation showing the formation of carbon monoxide. **[1]**

b) Which are the gases mixed with carbon monoxide to prepare water gas and producer gas respectively? **[1]**

c) Inhaling of excess carbon monoxide leads even to death. Why? **[1]**

18. Various allotropes of carbon are given in the box.

Diamond, wood charcoal, graphite, bone charcoal, coke

a) What is allotropy?

b) Which are the crystalline allotrope of carbon among these?

c) Write one use of each of these crystalline allotropes.

19. $NaOH + HCI \rightarrow (x) + H_2O$

(a) Write the chemical formula of X. **[1]**

(b) What is the name of this reaction? **[1]**

(Decomposition reaction, Neutralisation reaction, Combination reaction)

(c) Which acid and alkali are reacting to get the salt $CaSO_4$? **[2]**

20. $\overset{0}{Mg} + 2\overset{+1\ -1}{HCl} \rightarrow \overset{+2\ -1}{MgCl_2} + \overset{0}{H_2}$

(a) Which are the reactants in this reaction? **[1]**

(b) Oxidation number of which atom is increased? **[1]**

(c) This is a redox reaction. Why? **[1]**

(d) Which is the reducing agent in this reaction? **[1]**