

**GREENLAWNS HIGH SCHOOL
FIRST SEMESTER EXAMINATION**

16-9-2022

SUBJECT : CHEMISTRY

CALSS : VIII

TIME : 1 hour 30 min

MARKS : 60

Q.1 Fill in the blanks :-

6

- (a) The reaction of iron with steam is _____.
- (b) _____ is foul smelling gas produced when hydrogen reacts with Sulphur.
- (c) _____ is the number of electrons an atom can donate or accept to achieve stable configuration.
- (d) Hydrogen is a strong _____ agent.
- (e) Elements made up of 2 atoms of the same type are having _____ molecules.
- (f) _____ state of matter has very large kinetic energy.

Q.2 Name the following :-

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- (a) Process by which liquid loses energy and change its state.
- (b) Non-reactive element with 2 electrons in outer most orbit.
- (c) Separation method used to separate gas-gas mixture.
- (d) Quantity measured by comparing the mass of an atom with $1/12^{\text{th}}$ the mass of an atom of carbon.
- (e) Catalyst used in the process of hydrogenation.
- (f) Chemical reaction associated with simultaneous loss or gain of electron.

Q.3 Distinguish between (two points)

6

- (a) Oxidation reaction and Reduction reaction
- (b) Homogeneous mixture and Heterogeneous mixture
- (c) metalloids and noble gases

Q.4 Write observation and conclusion for the following :- **4**

- (a) mixture of water and kerosene is added into a separating funnel.
- (b) Blue litmus paper is placed in a test tube containing hydrogen.

Q.5 Draw the diagram to show the distribution of electrons in shells of **4**

- (a) magnesium atom
- (b) chlorine atom

Q.6 Write the chemical formula and the name of the compound formed using the pair of ions given :- **4**

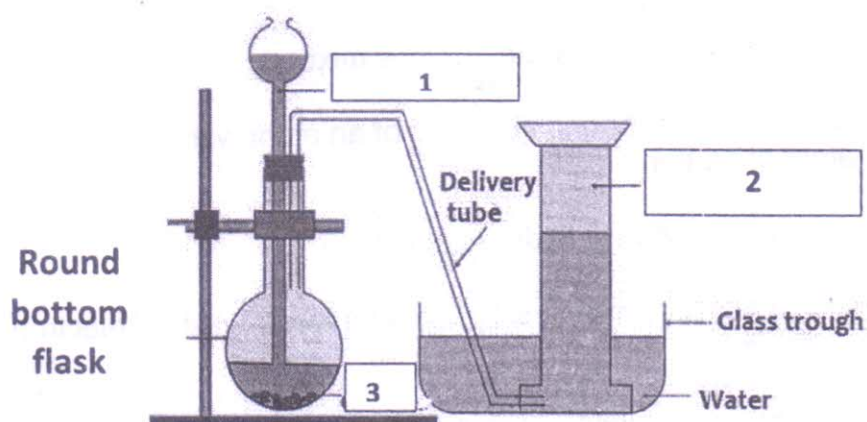
- (a) Fe^{2+} and OH^-
- (b) Ca^{2+} and HCO_3^-

Q.7 Select the acids and bases from the following compounds and complete the table below : **2**

N_2O , H_2SO_4 , $\text{Ca}(\text{OH})_2$, HNO_3 , KNO_3 , KOH , CuSO_4 , CO

Acids	
Bases	

Q.8 Answer the question related to laboratory preparation of Hydrogen gas



- (a) Label the boxes 1, 2 and 3. **3**
- (b) Name the apparatus used to add acid. **1**
- (c) Which method is used for collection of gas. **1**
- (d) Give one precaution related to collection of gas. **1**

Q.9 Use appropriate separation technique to separate mixture of water soluble salt MgCl_2 , insoluble salt CaCO_3 and **iron filings**.

(a) Record the information in the tabular form as shown below

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Method of separation used	Separated substance

(b) Iron shows variable valency. Choose and write the correct pair from below

Fe^{1+} & Fe^{2+}

Fe^{3+} & Fe^{1+}

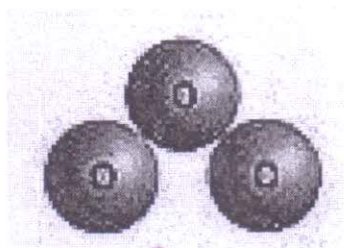
Fe^{2+} & Fe^{3+}

1

(c) Write the anion and cation with their charges, present in the salts CaCO_3 and MgCl_2 .

4

Q.10 Answer the following questions



(a) Name the molecule shown in the figure above.

1

(b) Why this molecule is termed as polyatomic?

1

(c) Apply kinetic theory of matter to explain arrangement of particles in gases

3

(d) Complete the given table :-

6

Element	${}_8\text{O}^{16}$
A	
Z	
Number of electrons	
Number of protons	
Number of neutrons	
Electronic configuration	