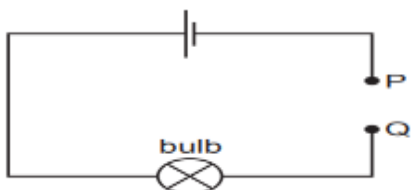


**Class: IX****MODEL PAPER EXAMINATION 2025****Time Allowed: 20 minutes****SUBJECT: CHEMISTRY****Q1: (SECTION "A") Marks: 12****Note:** Attempt all questions from section 'A'. Each question carries **ONE** mark.

- What is the chemical symbol for silver?
A. Ag B. An C. Si D. Sn
- How are the fourth and fifth periods in the periodic table classified?
A. Short period B. Long period C. Normal period D. Very long period
- Which branch of chemistry focuses on the compounds found in living organisms?
A. Electron pairs B. Lone pairs C. Bond pairs D. Shared pairs
- What is the general state of all transition elements?
A. Gases B. Metals C. Non-metals D. Metalloids
- Which gas diffuses the fastest?
A. Oxygen B. Chlorine C. Fluorine D. Helium
- Which of the following is a metalloid?
A. Br B. Si C. S D. Sr
- Free radicals are electrically:
A. Positively charged B. Negatively charged C. Neutral D. All of the above
- Compounds consist of atoms that are:
A. Of the same size B. Of different sizes C. With the same electrons D. With different electrons
- What is the relative atomic mass of sodium (Na)?
A. 1.008 amu B. 22.9898 amu C. 26.9815 amu D. 15.9994 amu
- What does the mass number of an atom represent?
A. Number of protons only B. Number of neutrons only C. Total number of protons and neutrons D. Number of electrons
- What does 1 mole of a substance refer to?
A. Molar mass B. Atomic mass C. Electron mass D. Neutron mass
- What does the molecular formula of a compound indicate?
A. Simplest ratio of atoms B. Actual whole-number ratio of atoms C. Whole-number ratio of atoms D. Natural number ratio of atoms

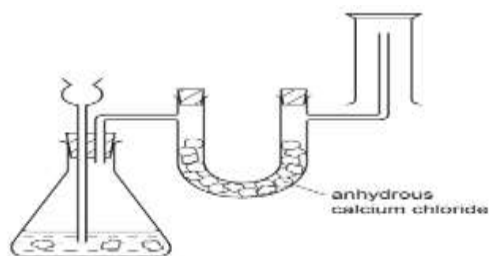
(Practical Based Assessment)**Marks: 15**

13. Pieces of material are placed in turn between P and Q in the incomplete electrical circuit shown. Which material would not cause the bulb to light?



- A. Aluminum B. Diamond C. Magnesium D. Zinc

14. The diagram shows a simple laboratory apparatus for the preparation and collection of a dry gas. What is the gas?

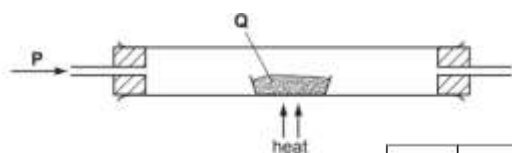


- A. Carbon dioxide B. Chlorine C. Hydrogen D. Hydrogen Chloride

15. What happens when a strip of silver is immersed in an aqueous solution of copper(II) sulfate?

- A. Bubbles of gas will appear B. No reaction occurs
C. Pink copper will be deposited on the silver strip D. The silver strip will start to dissolve

16. In the apparatus shown, Gas P is passed over solid Q.



No reaction occurs if P and Q are:

	P	Q
A	hydrogen	lead(II) oxide
B	hydrogen	magnesium oxide
C	oxygen	carbon
D	oxygen	sulfur



17. A student tests the conductivity of solutions prepared by dissolving different covalent compounds in water at 25°C. Which solution will demonstrate the highest electrical conductivity?
 A. HBr B. CH₄ C. C₆H₁₂O₆ D. CH₃COOH
18. A student conducts an experiment to separate a mixture of liquids using distillation. She heats the mixture and collects the condensed vapor. Which of the following types of mixtures is most likely being separated by this method?
 A. A mixture of ethanol and water B. A mixture of oil and water
 C. A mixture of sand and water D. A mixture of salt and water
19. A student heats a filtered solution of copper sulfate pentahydrate on a flame for an extended period of time. What is the likely result of this heating process?
 A. A dry, white powder B. Copper sulfate in a liquid form
 C. Blue crystalline solid with sharp edges D. Dark blue, large crystals of copper sulfate
20. A student is trying to separate sand from a mixture of sand and water. Which method should she use to effectively separate the components?
 A. Distillation B. Filtration C. Evaporation D. Crystallization

Class: IX**MODEL PAPER EXAMINATION 2025**
Time: 2 hours 40 minutes SUBJECT: CHEMISTRY SECTION "B" AND SECTION "C"
SECTION "B" (SHORT ANSWER QUESTIONS)
Total Marks 48
24 Marks
Note: Answer any **EIGHT** questions from section.

- Q2. What do the terms "periods" and "groups" refer to in the context of the periodic table?
- Q3. How would you prepare 100 mL of 0.4 M MgSO₄ solution from a stock solution of 2.0 M MgSO₄?
- Q4. Why are noble gases generally unreactive?
- Q5. What is electron affinity?
- Q6. Balance the following chemical equations using the inspection method:
- $$\text{KI} + \text{Cl}_2 \longrightarrow \text{KCl} + \text{I}_2$$
- $$\text{CaCO}_3 + \text{HCl} \longrightarrow \text{CaCl}_2 + \text{H}_2\text{O} + \text{CO}_2$$
- $$\text{NaHCO}_3 \longrightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O} + \text{CO}_2$$

Q7. Write the electronic configurations for the following elements:

- i) Carbon ii) Fluorine iii) Sodium

- Q8. A sample of gas has an initial pressure of 3 atm and a volume of 5 liters. If the pressure is reduced to 2 atm, what will be the new volume?
- Q9. What are the properties of cathode rays?
- Q10. What are electrochemical reactions? Explain their types based on the transfer of electrons.
- Q11. Calculate the number of moles and molecules present in 20 grams of NaOH.
- Q12. Why doesn't gasoline dissolve in water?
- Q13. What is electronegativity?

SECTION "C" DETAILED ANSWER QUESTIONS
24 Marks
Note: Answer any **FOUR** questions from section 'C'. Each question carries **SIX** marks.

- Q14. What is chemistry? List and briefly explain any five branches of chemistry.
- Q15. How do you calculate the molecular mass of HNO₃?
- Q16. Describe the Schrödinger model of the atom.
- Q17. What are polar and non-polar covalent bonds? Explain with examples.
- Q18. What are intermolecular forces? Define and explain their significance.

END OF PAPER