

CHEMISTRY
9th (PRE-BOARD EXAM. 2024-25)

Name: _____

Roll No: _____

Class/Section: _____

Time Allowed: 03 Hours

Marks: 65

۱۔ ہر سوال کے سامنے چار دائرے دیئے گئے ہیں، صرف صحیح جواب والا دائرہ بھریں۔

۲۔ دائروں کو شیڈ (بھرنے) کے لئے نیلے یا کالے رنگ کا پن استعمال کریں۔

Time Allowed: 15 minutes

Section "A"

Marks: 12

1. Anion is formed by gaining one or more.....
☐ Neutron ☐ Proton ☐ Electron ☐ Positron
2. Why is potassium iodide (KI) considered as powerful reducing agent?
☐ Iodide ion is oxidized to iodine ☐ Iodide ion is reduced to iodine ☐ Iodine is reduced to iodine ion ☐ Iodine is oxidized to iodine ion
3. The f-subshell can accommodate a maximum of
☐ 14 electrons ☐ 10 electrons ☐ 06 electrons ☐ 02 electrons
4. Which group of elements contains incomplete s-subshell?
☐ Group I-A ☐ Group II-A ☐ Group III-A ☐ Group IV-A
5. In Sodium Chloride, Chlorine after gaining one electron attains the electronic configuration of:
☐ Neon ☐ Argon ☐ Krypton ☐ Xenon
6. Helium obeys duplet rule. How many electrons are in its valance shell:
☐ 1 ☐ 2 ☐ 3 ☐ 4
7. Which of the given two elements will form ionic bond:
☐ Na and K ☐ K and Ca ☐ Ca and Cl ☐ Cl and C
8. Which of the given solution is more dilute?
☐ $10^{-2}M$ ☐ $10^{-3}M$ ☐ 10^3M ☐ $10^{-4}M$
9. Halogens react with metals to form.....
☐ Halides ☐ Oxide ☐ Halogen sulphides ☐ Hydrogenated compound
10. Which one of the given acts as oxidizing agent in the given reaction?
 $Br_2 + H_2S \rightarrow 2HBR + S$
☐ Br_2 ☐ H ☐ S ☐ H_2S
11. Reduction of alkali metals ion take place at:
☐ Anode ☐ Walls of cell ☐ Battery ☐ Cathode
12. The fifth element of the first transition series is:
☐ Chromium ☐ Titanium ☐ Maganees ☐ Vanaidum

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Note: Time allowed for Section – B and Section – C is 2 Hours and 45 minutes.

Section – B

Marks: 32

Q. II Answer any EIGHT parts. Each part carries FOUR marks.

- Q. 1 Differentiate between physical chemistry and analytical chemistry.
- Q. 2 Compare alkali and alkaline earth metals with reference to their location in periodic table.
- Q. 3 Write factors which affect the ionization energies of atoms.
- Q. 4 Which rule is followed by Oxygen and Helium to complete their valence shell and why they do so?
- Q. 5 Draw a diagram to show the ionic bond in MgO?
- Q. 6 With the help of dot cross structure show the formation of CH₄ and NH₃.
- Q. 7 A gas occupies 4.31 liters at a pressure of 0.755 atm. Determine the volume if the pressure is increased to 1.25 atm.
- Q. 8 Calculate the molarity of a solution containing 0.5 moles of HCl in 1.5 dm³.
- Q. 9 Explain the chemical reaction of electroplating.
- Q. 10 Explain cell reaction in voltaic cell. Write half-cell reactions and overall reaction.
- Q. 11 Interpret the chemical reaction between
- i. Potassium and iodine ii. Hydrogen and iodine

Section-C

Marks: 21

NOTE: Attempt any THREE questions. All questions carry equal marks.

- Q. 12. (a) Calculate gram molecular mass of H₂SO₄.
(b) What do you know about Auf-Bau's principle? How many electrons can accommodate in M shell of an element?
- Q. 13. (a) Which group is known as Boron family in periodic table? Write names of elements present in this group.
(b) Write the role of electronegativity in the formation of bonds.
- Q. 14. (a) Explain solid state with reference to attractive forces, motion and gravity.
(b) Complete the following table

Class of Colloid	Phase	Example
Gell	?	?
?	?	Butter

- Q. 15 (a) Explain how Alloying and cathodic protection helps to prevent corrosion.
(b) Explain the formation of cations from the given elements Na, Ca and Al