

CHEMISTRY9th (Fresh/Reappear)

- ۱۔ ہر سوال کے سامنے چار دائرے دیئے گئے ہیں، صرف صحیح جواب دلا داتا کرنا ضروری ہے۔
- ۲۔ دائروں کو شیڈ (بھرنے) کے لیے نیلے یا کالے رنگ کا مارکر استعمال کریں۔
- ۳۔ جواب میں ایک سے زائد دائرے بھرنے سے جواب غلط تصور ہوگا۔

Time: 15 Minutes

SECTION-A

Marks: 12

Q1: Choose the correct option i.e, A,B,C or D?

- If a gas occupy a volume of 300ml at 17°C. What is its volume at 10°C.
☐ 292.7ml ☐ 290.7ml ☒ 291.7ml ☐ 489.2ml
- If element (x) belongs to group VII-A in periodic table, the ion formed by it will be.
☐ X^{-2} ☐ X^{-1} ☒ X^{+1} ☐ X^{+2}
- Which of the given is an example of solid in gas solution?
☐ Fog ☒ Humid Air ☐ Smoke ☐ Air
- What is the main difference between a suspension and a colloid?
☐ Shape ☐ Density ☐ Particle size ☒ Charge
- Oxidation refers to.
☒ Addition of hydrogen ☐ Loss of oxygen
☐ Increase in of electron number
☐ Increase in oxidation number
- In electrolytic cell, electrons are supplied by.
☐ Reducing agent ☐ Oxidizing agent
☐ Chemical reaction ☒ External battery
- Brick red color flame is produced when oxygen reacts with.
☒ Magnesium ☐ Calcium ☐ Sodium ☐ Aluminum
- Identify homo-atomic molecule among the given.
☐ CO_2 ☐ HCl ☒ Cl_2 ☐ H_2O
- According to Boyle's law product of pressure and volume.
☐ Increases ☐ Decreases
☒ Remains constant ☐ Varies with time
- Which of the given isotope is used to measure the moisture content of soil in building construction?
☐ Cf-252 ☐ Kr-85 ☒ Am-241 ☐ C-14

11. Chromium (Cr) shows +3 and +4 valencies in different compounds, in which block it is placed.
☐ S-block ☐ P-block ☒ D-block ☐ F-block
12. Which of the given contain polar covalent bond.
☐ Hydrogen ☒ Phosphine ☐ Chlorine ☐ Bromine

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Note: Time allowed for Section-B & Section-C is 2 Hours and 40 Minutes.

SECTION-B

Marks: 32

Q2: Answer any EIGHT parts. Each part carries 4 marks?

1. Give at-least four main differences between mixture & compound?
2. What did Rutherford discovered as a result of gold foil experiment?
3. Which atom in each of the following sets has smallest electron affinity value and why:
(a) K, Na, Li (b) Be, Mg, Ca (c) F, Cl, Br
4. How many valance electrons are present in the following elements:
(a) Phosphorus (b) Sulphur (c) Nitrogen (d) Sodium
5. What is the key difference between the bonding between NH_4^+ and CH_4 molecule? Give suitable reasons?
6. Why water has less vapor pressure than that of acetone at same temperature?
7. A solution of NaOH (molar mass 40g mol^{-1}) was prepared by dissolving 1.6g of NaOH in 500cm^3 of water. Calculate molarity of the NaOH solution?
8. Differentiate between miscible and immiscible liquid with example of each?
9. How do strong electrolytes differ from weak electrolytes in terms of ionization? Give examples?
10. Write reactions which take place during electrolysis of fused sodium chloride?
11. Write reaction of sodium with: (a) Sulphur (b) Chlorine

SECTION-C

Marks: 21

Q3: Attempt any THREE questions. All question carry equal marks?

1. (a) How many moles are present in 20g of H_2O ? 3
(b) Write electronic configuration of following elements in their sub-shells: 4
(a) Beryllium (b) Nitrogen (c) Oxygen (d) Neon
2. (a) Which group in periodic table is known as halogens? Write main characteristic of halogens? 3
(b) Draw Lewis structure of the following compounds: 4
(a) H_2S (b) H_2O (c) NH_3 (d) N_2
3. (a) Classify the following as amorphous and crystalline solids: 3
(a) Cotton candy (b) Naphthalene (c) Lead pencil
(b) A sample of water contains 2g of hydrogen and 16g of oxygen. Calculate percentage composition by mass? 4
4. (a) Identify oxidizing and reducing agents in the given reaction. Justify your answer with reference to oxidation state. 4
 $2Mn + SnCl_4 \longrightarrow 2MnCl_2 + Cl_2$
(b) How un-reactivity of platinum makes it useful? 3

