

Time: 3 Hours

Marks: 65

Note: There are THREE sections in this paper i.e. A, B & C. Attempt Section-A and return it to the superintendent within the given time. No marks will be awarded for cutting, erasing and overwriting. Mobile Phones are strictly prohibited in Examination Hall.

Time: 15 minutes

Section A

Marks: 12

QNo.1 Select the correct option and shade (A,B,C,D) in the given Bubble Answer sheet.

- i. Hydrochloric acid, nitric acid and white lead prepared by \_\_\_\_\_.  
A. Al Razi B.  Jabir Ibn Hayam C. Ibne-Sina D. Al Beruni
- ii. The symbol of Gold is \_\_\_\_\_. A. Hg B. Fe C. Au D. Ag
- iii. Rutherford bombarded gold with \_\_\_\_\_.  
A.  Particles B. Particles C. rays D. Electrons
- iv. Hydrogen has \_\_\_\_\_ isotopes. A. Two B.  Three C. Four D. Five
- v. The ability of an atom to attract electron (s) towards itself is called \_\_\_\_\_.  
A. electron affinity B. electro positivity C. Shieling effect D.  Electro negativity
- vi. The modern periodic table is based on \_\_\_\_\_.  
A.  Atomic number B. electro positivity C. Shieling effect D. Electro negativity
- vii. According to Octet rules, an atom has the tendency to attain \_\_\_\_\_ electrons in its outer most shell. A. 2 B. 4 C. 6 D.  8
- viii. An atom with charge is called \_\_\_\_\_.  
A. An electron B.  An ion C. A molecule D. Radical
- ix. Diamond is a crystalline form of \_\_\_\_\_.  
A. Iron B. Copper C.  Carbon D. Gold
- x. Mercury amalgam is an example of \_\_\_\_\_.  
A.  Liquid in solid B. Liquid in gas C. Liquid in liquid D. Solid in solid
- xi. A cation is a \_\_\_\_\_.  
A. Neutral B. Negatively charged C.  colored D. Positively charged
- xii. Group VII elements are collectively called \_\_\_\_\_.  
A.  Halogens B. chalcogen C. Alkali D. Inert

Note: Time allowed 2:45 hours

SECTION – B

Marks: 32

Q2: Answer any EIGHT parts. Each part carries equal marks.

- i. Differentiate between empirical formula and molecular formula with suitable examples.
- ii. What is the mass of 5 moles of ice (atomic masses: H = 1amu, O = 16amu)
- iii. What is electronic configuration? Give the electronic configuration of Na<sup>11</sup>.
- iv. Isotopes have different physical properties but have the same chemical properties. Why?
- v. Differentiate between representative and transition elements with examples.
- vi. Discuss ionic bond. Support your answer with suitable example.
- vii. Hydrogen bonding is an intermolecular force. Explain this statement.
- viii. What is evaporation? Give three factors on which evaporation depends.
- ix. What is molarity?
- x. Why NaOH is a strong but NH<sub>4</sub>OH is a weak electrolyte?
- xi. Give at least four uses of Calcium.

SECTION – C

Marks: 21

Note: Attempt any THREE of the following. All questions carry equal marks.

- Q3: a) What is Chemistry? Discuss contribution of Jabber-Ibn-Hayan in the field of Chemistry. (4)
- b) Discuss at least three main defects found in Rutherford's Atomic Model. (3)
- Q4: a) State electronegativity alongwith factors affecting electronegativity. (4)
- b) Differentiate between unsaturated, saturated and super saturated solution. (3)
- Q5: a) Explain Boyle's Law and verify this law experimentally. (4)
- b) What is Lewis structure? Draw the Lewis structure of (3)
- (i) CCl<sub>4</sub> (ii) BF<sub>3</sub>
- Q6: a) State electroplating and discuss at least three purposes of electroplating. (4)
- b) Give at least three comparisons of metals and non-metals. (3)