

Total No. of Printed Pages: 02

SUBJECT CODE NO:- 2001
FACULTY OF SCIENCE AND TECHNOGY
B.Sc. F.Y Sem. I
EXAMINATION JUNE / JULY 2022
Chemistry Paper-I(Inorganic Chemistry)

[Time: 1:53 Hours]

[Max. Marks:50]

- N.B Please check whether you have got the right question paper.
1. Attempt all the questions.
 2. All questions carry equal marks.
 3. Illustrate your answer with suitable labeled diagram.
- Q.1
- a. What are quantum number? Explain principle quantum number and Azimuthal quantum number. 10
 - b. What is Ionisation potential? Explain its trend in periodic table. 10
- OR
- c. Define electronic configuration? Explain electronic configuration of alkali and alkaline earth metal elements? 10
 - d. What are interhalogen compounds? Explain in detail Ax_3 and Ax_7 type of interhalogen compounds. 10
- Q.2
- a. State and explain Heisenberg's uncertainty principle and Hund's rule of maximum multiplicity 10
 - b. i. Explain why size of anion is bigger than its parent atom 10
 - b. ii. Define electronegativity and explain its trend in periods in periodic table. 10
- OR
- Write notes on any four of the following 20
- a. Solvation tendency of 'S' block elements.
 - b. Hydrides of group 13th elements
 - c. Diagonal relationship between boron and silicon.
 - d. Oxidation state of carbon family
 - e. Bohr's atomic theory
 - f. Oxides of Nitrogen and phosphorus
- Q.3 Attempt the following 10
1. Magnetic quantum number describe---
 - a. Shape of orbital
 - b. Spin of electron
 - c. Size of orbital
 - d. Orientation of suborbitals
 2. The element having largest atomic size-----
 - a. Na
 - b. Cs
 - c. Rb
 - d. Br

3. In Bunsen flame beryllium shows -----colour
 - a. Crimson red
 - b. Violet
 - c. Golden yellow
 - d. None of these
4. The D- orbital which does not have four lobe is -----
 - a. $dx^2 - Y^2$
 - b. dz^2
 - c. dyz
 - d. dxy
5. Among the following the strongest base is _____
 - a. NH_3
 - b. PH_3
 - c. AsH_3
 - d. SbH_3
6. The nature of CO_2 is _____
 - a. Amphoteric
 - b. Basic
 - c. Natural
 - d. Acidic
7. Shape of D- orbital is _____
 - a. Double dumb bell
 - b. Umb bell
 - c. Spherical
 - d. None of these
8. Alkaloids are the hydrides of _____
 - a. Si
 - b. N
 - c. C
 - d. Se
9. The important element in biological process 'sodium pump' is _____
 - a. Ca
 - b. K
 - c. Mg
 - d. Be
10. Alumina is _____
 - a. Al_3N_3
 - b. $AlCl_3$
 - c. $Al(OH)_3$
 - d. Al_2O_3