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SUBJECT CODE NO: - Y-2001
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y (Sem-I)
Examination March / April - 2023
Chemistry Paper-I (Inorganic Chemistry)

[Time: 1:30 Hours]**[Max. Marks: 50]**

Please check whether you have got the right question paper.

N. B

- 1) Attempt all the questions
- 2) All question carry equal Marks.
- 3) Illustrate your answer with suitable labelled diagram

Q1 a) What are quantum numbers? Explain principle quantum number? 10

b) Discuss the trend of atomic & Ionic radii in period and group? 10

OR

c) What is diagonal relationship? Explain the diagonal relationship of Li and Mg 10

d) Define electronegativity? How does it vary along with period and group? 10

Q2 a) State & explain Pauli's exclusion and Aufbau principle. 10

b) What are inter halogen compounds? Explain its types 10

OR

write a notes on any four of the following 20

a) Trends of ionization potential in the periodic table

b) Factors affecting on electronegativity

c) Postulates of Bohr's atomic theory

d) Hydrides of group 13 elements.

e) Heisenberg's uncertainty principle

Q3 Attempt the following

- 1) Electronegativity is the tendency of atom to _____.
 - a) Accept electron
 - b) Loss electron
 - c) share electron with other atoms
 - d) Attract bonding electrons
- 2) Choose the correct statement from the following.
 - a) cation and anion are equal in size
 - b) cation is larger in size than parent atom
 - c) cation is larger in size than anion
 - d) anion is larger in size than parent atom
- 3) The Valence shell electron structure of an element is $ns^2 np^2$ the element will belong to the group of _____.
 - a) Alkali metals
 - b) Inert metals
 - c) Noble gases
 - d) Halogens.
- 4) Shape of 'd' orbital is _____.
 - a) Dumb bell
 - b) spherical
 - c) double dumb-bell
 - d) None of these
- 5) which of the following is most electronegative
 - a) Tin
 - b) carbon
 - c) Lead
 - d) silicon
- 6) Which of the following is inter halogen compound?
 - a) KCl
 - b) ICl₃
 - c) HCl
 - d) NaCl
- 7) In the long form of periodic table, all the non-metals are placed under
 - a) s-block
 - b) p-block
 - c) d-block
 - d) f-block
- 8) Bond Angle is minimum for _____.
 - a) H₂O,
 - b) H₂S
 - c) H₂ Se
 - d) H₂Te
- 9) Which of the following is alkaline earth metal?
 - a) Li
 - b) Mg
 - c) Rb
 - d) K
- 10) From following which hydride is more acidic in nature?
 - a) H₂O
 - b) H₂S
 - c) H₂ Se
 - d) H₂Te