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SUBJECT CODE NO: - Y-2001
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (PATTERN-2013) F.Y. (SEM I)
Examination April / May - 2024
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 questions carry equal marks.
- 3) Illustrate your answer with suitable labelled diagram.

- Q.1** (A) What are quantum numbers? Explain Azimuthal quantum number? 10
 (B) What is ionisation potential & Explain the trends of ionisation potential in periodic table 10

OR

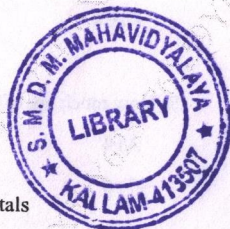
- (C) What are s- block elements? Explain role of alkali metals in biological system. 10
 (D) Explain the trends, in the following properties of VII A gr. element 10
 i) Ionization potential ii) Electronegativity

- Q.2** (A) What are 'p' block elements? Explain trends in following properties of III A group 10
 i) Atomic size ii) Electronegativity
 B) What are periodic properties? Explain classification of atomic radii. 10

OR

Write short Notes on any four of the following.

- A) Hund's rule of maximum multiplicity
- B) Diagonal relationship between Boron and silicon
- C) Oxides of group VA
- D) Electronic configuration of II A or alkaline earth metals
- E) Interhalogen compounds.



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- Q.3 Attempt the following** 10
 1) The principle quantum number, n describes.

- | | |
|----------------------------------|--------------------------|
| A) Shape of orbital | B) Sub-shell of electron |
| C) Main energy shell of electron | D) Spin of electron |

2) Alkali metals belongs to _____

- A) s-block elements
B) f-block elements
C) d-block elements
D) p-block elements

3) Which of the following pair show diagonal relationship?

- A) B & Al
B) Li & Na
C) C & Si
D) B & Si

4) Elements with atomic number 12 belongs to which block?

- A) s-block elements
B) p-block elements
C) d-block elements
D) f-block elements

5) From the following which element is present in chlorophyll?

- A) Ca
B) Na
C) Mg
D) K

6) From the following which element is smallest in size?

- A) Na
B) K
C) Cs
D) Rb

7) How much no. of electrons can be accommodated in p-orbital?

- A) 4
B) 2
C) 6
D) 10

8) What happen about atomic radii from left to right in periodic table?

- A) Decreases
B) Increases
C) Remain same
D) All of above



9) From the following which d-orbital does not have four lobes?

A) dz^2

B) dx^2-y^2

C) dxy

D) dyz

10) Heisenberg's uncertainty principle rules out the exact simultaneous measurement of _____

A) Probability & intensity

B) Energy & velocity

C) Charge density and radius

D) Position and velocity.

