

BCM SCHOOL BASANT AVENUE DUGRI ROAD LUDHIANA PUNJAB

ASSIGNMENT

SUBJECT -CHEMISTRY

CHAPTER- d & f BLOCK ELEMENTS

DATE – 26 /10/2024

MCQs

1-Which of the following reasons is responsible for the formation of alloys by transition elements?

- (a) They have same atomic number**
- (b) They have same electronic configuration**
- (c) They have nearly same atomic size**
- (d) None of the above**

2-Zr and Hf have almost equal atomic and ionic radii because of

- (a) diagonal relationship**
- (b) lanthanoid contraction**
- (c) actinoid contraction**
- (d) belonging to the same group**

3-Which one of the following is diamagnetic ion?

- (a) Co^{2+}**
- (b) Ni^{2+}**
- (c) Cu^{2+}**
- (d) Zn^{2+}**

4-Which of the following pairs of ions have the same electronic configuration?

(a) Cu^{2+} , Cr^{2+}

(b) Fe^{3+} , Mn^{2+}

(c) Co^{3+} , Ni^{3+}

(d) Sc^{3+} , Cr^{3+}

5-Colour of transition metal ions are due to absorption of the some wavelength. This results in

(a) d-s transition

(b) s-s transition

(c) s-t/transition

(d) d-d transition

Subjective Questions

6- Why acidic character of oxides of transition metals increases with increase in Oxidation state?

7- Why Cu has positive reduction potential?

8- Why Cuprous ion is not stable in aqueous solution?

9-Why HNO_3 and HCl can't to used to make the medium acidic during KMnO_4 vs Mohr's salt titration?

10-In KMnO_4 oxidation state of Mn is +7,Why is it purple in colour?

11-What is trend of stability of higher oxidation state on moving down the group in d block elements? And Why?

12-How would you prepare KMnO_4 from Pyrolusite ore?

13- How would you prepare $\text{K}_2\text{Cr}_2\text{O}_7$ from Chromite ore?

14-Why radius of Fe Co & Ni is approximately same?

15-Write general electronic configuration of f block elements.

What is most common oxidation state of f block elements?

