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**Max Time : 1 hr** **Class = 12th Chemistry Test**  **Max Marks : 25**

**D & F BLOCK**

1. Multiple choice questions : [ 1 X 3 = 3]
2. KMnO4 acts an oxidizing agent in acidic medium. The number of moles of KMnO4 that will be needed to react with one mole of sulphide ions in acidic solution is :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 2/5 | b) 3/5 | c) 4/5 | d) 1/5 |

1. KMnO4 acts as an oxidizing agent in alkaline medium. When alkaline KMnO4 is treated with KI, iodide ion is oxidized to \_\_\_\_\_\_\_\_\_\_.

|  |  |  |  |
| --- | --- | --- | --- |
| a) I2 | b) IO – | c) | d) |

1. Which of the following oxidation state is common for all lanthanoids?

|  |  |  |  |
| --- | --- | --- | --- |
| a) + 2 | b) + 3 | c) + 4 | d) + 5 |

1. Calculate the ‘spin only’ magnetic moment of M2+ (aq) ion. (Z = 27). [ 2 ]
2. Explain why Cu+ ion is not stable in aqueous solutions? [ 2 ]
3. Name the oxo-metal anions of the first series of the transition metals in which the metal exhibits the oxidation state equal to its group number. [ 2 ]
4. Write the electronic configurations of the elements with atomic numbers 61, 91 , 101 and 109. [ 2 ]
5. What is lanthanoids contraction? What are the consequences of lanthanoids contraction? [ 3 ]
6. Describe the oxidizing agent of potassium dichromate and write the ionic equations for its reaction with : (i) Iodide (ii) iron (II) solution (iii) H2S. [ 3 ]
7. Indicate the steps in the preparation of : K2Cr2O7 from chromate ore. [ 3 ]
8. Describe the preparation of potassium permanganate. How does the acidified permanganate react with : (i) iron (II) ions (ii) SO2 (iii) Oxalic acid? Write the ionic equation for the reaction.

[ 5 ]