

**B.Sc. PART-(III), HONOURS**  
**FINAL INTERNAL ASSESSMENT**  
**SUB- CHEMISTRY (INORGANIC)**  
PAPER- X , TIME - 30 MIN FULL MARKS- 20  
DATE- 17/07/2020. TIME- 7:00PM TO7:30PM

**All questions are compulsory each carry 2 marks**

1. The correct d- electron configuration showing spin-orbit coupling is-  
a)  $t_{2g}^6 e_g^0$ .      b)  $t_{2g}^3 e_g^2$       c)  $t_{2g}^6 e_g^2$       d)  $t_{2g}^4 e_g^0$
2. The pairs of normal and inverse spinel respectively are-  
a)  $NiFe_2O_4$  &  $Co_3O_4$       b)  $Fe_3O_4$  &  $Mn_3O_4$ .  
c)  $Fe_3O_4$  &  $Co_3O_4$       d)  $Mn_3O_4$  &  $NiFe_2O_4$
3. Among the following metal carbonyl species, the one with the highest metal- carbon back bonding is-  
a)  $[Ti(CO)_6]^{-2}$       b)  $[V(CO)_6]^-$       c)  $Cr(CO)_6$       d)  $[Mn(CO)_6]^+$
4. Low spin iron(III) centre is present in-  
a) deoxy form of hemoglobin.      b) oxy form of hemoglobin  
c) haemocyanin      d) carbonic anhydrase
5. Absorption spectrum of chlorophyll is maximum in which light-  
a) blue.      b) red.      c) yellow.      d). blue- violet
6. The number of CO bridging in  $Fe_3(CO)_{12}$  cluster is -  
a) 1      b) 2      c) 4      d) 3
7. Wilkinson's catalyst is used for-  
a) Hydrogenation    b) Epoxidation    c) Metathesis reaction.    d) Polymerization
8. Indicator used in redox titration is-  
a) Methyl orange    b) Eriochrome black T    c) Methylene blue    d) Phenolphthalein
9. The pair of semi-metals in the following is-  
a) Al, Si      b) Ge, As      c) Sb, Te.      d) Ca, B
10. The experimental magnetic moment of  $K_3[Fe_3(CN)_6]$  is 2.3 and is attributable to the -  
a) Spin-only value of low spin iron  
b) Spin-only value of high spin iron  
c) Low-spin iron with orbital contribution  
d) High-spin iron with orbital contribution





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