

CLASS : XI<sup>th</sup>  
DATE :

SUBJECT : CHEMISTRY  
DPP No. : 9

## Topic :- THE D-AND F-BLOCK ELEMENTS

- Which is not correct for transition metals?  
a) Variable oxidation states  
b) Complex formation  
c) Partially filled *d*-orbitals  
d) All the ions are colourless
- Magnetic moment of  $[\text{Ag}(\text{CN})_2]^-$  is zero. How many unpaired electrons are there?  
a) Zero                      b) 4                      c) 3                      d) 1
- The first man-made atom is:  
a) Os                      b) Na                      c) Zr                      d) Tc
- Amongst the following, the lowest degree of paramagnetism per mole of the compound at 298 K will be shown by  
a)  $\text{MnSO}_4 \cdot 4\text{H}_2\text{O}$                       b)  $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$                       c)  $\text{FeSO}_4 \cdot 6\text{H}_2\text{O}$                       d)  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
- Which compound does not dissolve in hot, dil.  $\text{HNO}_3$ ?  
a) HgS                      b) PbS                      c) CuS                      d) CdS
- Heteropoly acids are formed by:  
a) Be                      b) Fe                      c) Mo                      d) Cr
- When mercury (I) chloride is heated and the vapour so evolved are cooled, the substance on sublimation thus collected consists of  
a) Mercury and mercury (II) chloride                      b) Mercury (II) chloride  
c) Mercury (I) and mercury (II) chloride                      d) Mercury
- Steel contains:  
a) 2.5–4.5%C                      b) 0.5–1.5%C                      c) 0.12–0.25%C                      d) 1–2%C

9. Silver halides are used in photography because they are:
- Photosensitive
  - Soluble in hypo solution
  - Soluble in  $\text{NH}_4\text{OH}$
  - Insoluble in acids
10. A lady's 18 carat gold wedding ring has become discoloured with some minute drops of mercury from a broken thermometer. Which of the following treatments would restore it to its original condition?
- Place it in hot strong nitric acid
  - Place it in cold dilute hydrochloric acid
  - Heat it gently in a sand-bath
  - Heat it in chlorine
11. Oxidation state of Hg in amalgam is:
- Zero
  - One
  - Two
  - Three
12. In the manufacture of iron from an iron oxide ore, limestone is added because it acts as:
- An oxidizing agent
  - A reducing agent
  - A flux
  - A precipitating agent
13. The coordination number of copper in the complex formed by adding excess of  $\text{NH}_3$  to  $\text{CuSO}_4$  solution is:
- 4
  - 2
  - 6
  - 5
14. In order to refine "blister copper" it is melted in a furnace and is stirred with green logs of wood. The purpose is:
- To expel the dissolved gases in the blister copper
  - To bring the impurities to surfaces and oxidise them
  - To increase the carbon content of copper
  - To reduce the metallic oxide impurities with hydrocarbon gases liberated from the wood
15. Permanent magnets are generally made of alloys of
- Mn
  - Co
  - Pb
  - Zn
16. Which metal sulphide is not black?
- NiS
  - CoS
  - CuS
  - ZnS
17. The white solid that turns black on addition of  $\text{NH}_4\text{OH}$  is:
- AgCl
  - $\text{PbCl}_2$
  - $\text{Hg}_2\text{Cl}_2$
  - $\text{Hg}_2\text{I}_2$
18. Which of the following represents ammonium molybdate?
- $(\text{NH}_4)_2\text{MoO}_4$
  - $(\text{NH}_4)\text{MoO}_2$
  - $(\text{NH}_4)_2\text{MoO}_3$
  - $\text{NH}_4 \cdot 12\text{MoO}_3$

19. Gold and silver are called noble metals, because:
- a) They do not normally react
  - b) Even acids cannot dissolve them
  - c) They are used in jewellery
  - d) They are worn by noble men
20. The colour of  ${}_{62}\text{Sm}^{3+}$  is yellow. The expected colour of  ${}_{66}\text{Dy}^{3+}$  is
- a) Yellow
  - b) Red
  - c) Blue
  - d) Green

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