QB365 Student Learing Managemnet System
Exam Name: Pre Quarterly -Practice
Std: 12th Standard - Chemistry
Chapter: Metallurgy, p - Block Elements - II, p - Block Elements - I, Transition and Inner Transition Elements, Coordination Chemistry, Solid State, Chemical Kinetics, Ionic Equilibrium, Electro Chemistry, Surface Chemistry, Hydroxy Compounds and Ethers, Carbonyl Compounds and Carboxylic Acids, Organic Nitrogen Compounds, Biomolecules, Chemistry In Everyday Life

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Questions:

I. Multiple Choice Question

1. Wolframite ore is separated from tinstone by the process of_____.
   (a) Smelting (b) Calcination (c) Roasting (d) Electromagnetic separation

2. In the Ellingham diagram, for the formation of carbon monoxide_____.
   (a) $\left(\frac{\Delta S^0}{\Delta T}\right)$ is negative (b) $\left(\frac{\Delta G^0}{\Delta T}\right)$ is positive (c) $\left(\frac{\Delta G^0}{\Delta T}\right)$ is negative (d) initially $\left(\frac{\Delta T}{\Delta G^0}\right)$ is positive, after 700°C, $\left(\frac{\Delta G^0}{\Delta T}\right)$ is negative

3. On hydrolysis, PCl_3 gives_____.
   (a) H_3PO_3 (b) PH_3 (c) H_3PO_4 (d) $POCl_3$

4. When copper is heated with conc HNO_3 it produces _____.
   (a) $Cu(NO_3)_2$, NO and NO_2 (b) $Cu(NO_3)_2$ and N_2O (c) $Cu(NO_3)_2$ and NO_2 (d) $Cu(NO_3)_2$ and NO

5. The geometry at which carbon atom in diamond are bonded to each other is _____.
   (a) Tetrahedral (b) hexagonal (c) Octahedral (d) none of these

6. Which of the following lanthanoid ions is diamagnetic?
   (a) Eu^{2+} (b) Yb^{2+} (c) Ce^{2+} (d) Sm^{2+}

7. In which of the following coordination entities the magnitude of Δ_0 will be maximum?
   (a) $[Co(CN)_6]^{3-}$ (b) $[Co(C_2O_4)_3]^{3-}$ (c) $[Co(H_2O)_6]^{3+}$ (d) $[Co(NH_3)_6]^{3+}$

8. A complex in which the oxidation number of the metal is zero is_____.
   (a) $K_4[Fe(CN)_6]$ (b) $[Fe(CN)_3(NH_3)_3]$ (c) $[Fe(CO)_5]$ (d) both (b) and (c)

9. The vacant space in bcc lattice unit cell is _____.
   (a) 48% (b) 23% (c) 32% (d) 26%

10. The decomposition of phosphine (PH_3) on tungsten at low pressure is a first order reaction. It is because the _____.
    (a) rate is proportional to the surface coverage (b) rate is inversely proportional to the surface coverage (c) rate is independent of the surface coverage
    (d) rate of decomposition is slow

11. Consider the following statements:
    (i) increase in concentration of the reactant increases the rate of a zero order reaction.
    (ii) rate constant k is equal to collision frequency A if $E_a = 0$
    (iii) rate constant k is equal to collision frequency A if $E_a = \infty$
    (iv) a plot of ln (k) vs T is a straight line.
    (v) a plot of ln (k) vs $\left(\frac{1}{T}\right)$ is a straight line with a positive slope.
    Correct statements are
    (a) (ii) only (b) (ii) and (iv) (c) (ii) and (v) (d) (i), (ii) and (v)

12. The oxidation state of the central metal ion in the complex $[Co(H_2O)(CN)(en)_2]^{2+}$ is_____.
    (a) 0 (b) +1 (c) +2 (d) +3

13. The following set of reaction is used for refining titanium. This method is known as_____
    $Ti_{(g)} + 2I_{2(s)} \longrightarrow TiI_4\,(vapour)$
    $TiI_4(vapour) \longrightarrow Ti_{(g)} + 2I_{2(s)}$
    (a) Hall Heroult process (b) Mond process (c) Van-Arkel process (d) Alumino thermic process

14. Equivalent weight of $KMnO_4$ in acidic medium is _____.
    (a) 3.16 (b) 31.6 (c) 158 (d) 52.67

15. If the solubility product of lead iodide is 3.2×10^{-8}, its solubility will be _____.
    (a) 2×10^{-3}M (b) 4×10^{-4}M (c) 1.6×10^{-5}M (d) 1.8×10^{-5}M

16. A certain current liberated 0.504gm of hydrogen in 2 hours. How many grams of copper can be liberated by the same current flowing for the same time in a copper sulphate solution _____.
    (a) 31.75 (b) 15.8 (c) 7.5 (d) 63.5

17. Match the following

a	V_2O_5	i	High density polyethylene
b	Ziegler – Natta	ii	PAN
c	Peroxide	iii	NH_3
d	Finely divided Fe	iv	H_2SO_4

(a)

A	B	C	D
iv	i	ii	iii

(b)

A	B	C	D
i	ii	iv	iii

(c)

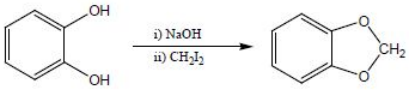
A	B	C	D
ii	iii	iv	i

(d)

A	B	C	D
iii	iv	ii	i

18. Which one of the following will react with phenol to give salicyladehyde after hydrolysis.
    (a) Dichlo methane (b) trichloroethane (c) trichloro methane (d) CO_2

19. The reactions



is an example of _____.

(a) Wurtz reaction (b) cyclic reaction (c) Williamson reaction (d) Kolbe reactions

20. In the following reaction, $HC \equiv CH \xrightarrow[HgSO_4]{H_2SO_4} X$ Product 'X' will not give _____.

(a) Tollen's test (b) Victor meyer test (c) Iodoform test (d) Fehling solution test

21. When aniline reacts with acetic anhydride the product formed is_____.

(a) o – aminoacetophenone (b) m-aminoacetophenone (c) p – aminoacetophenone (d) acetanilide

22. $C_5H_{13}N$ reacts with HNO_2 to give an optically active compound – The compound is _____.

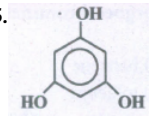
(a) pentan – 1- amine (b) pentan – 2- amine (c) N,N – dimethylpropan -2-amine (d) diethyl methyl amine

23. The secondary structure of a protein refers to _____.

(a) fixed configuration of the polypeptide backbone (b) hydrophobic interaction (c) sequence of α-amino acids (d) $\alpha-$helical backbone.

24. Nylon is an example of _____.

(a) polyamide (b) polythene (c) polyester (d) poly saccharide

25. 

is _____

(a) Mesitylene (b) Pyrogallol (c) Hydroxy quinol (d) Phluroglucinol

26. The rate of decomposition of hydrogen peroxide decreases in presence of _____.

(a) Platinum (b) Iron (c) MnO_2 (d) Glycerine

27. The maximum work that can be derived from a chemical reaction is _____.

(a) $W_{max} = \Delta H$ (b) $W_{max} = \Delta G$ (c) $W_{max} = \Delta E$ (d) $W_{max} = \Delta S$

28. Tollen's reagent is _____.

(a) ammoniacal cuprous chloride (b) ammoniacal cuprous oxide (c) ammoniacal silver nitrate (d) ammoniacal silver chloride

29. Prismatic form of Borax is _____.

(a) $[B_4O_5.(OH)_4]^{2-}$ (b) $[B_2O_5.(OH)_2]^{2+}$ (c) $[B_2O_3.(OH)_3]^{2-}$ (d) $[B_2O_6.(OH)_3]^{2+}$

30. The unit of rate constant for the reaction, $2H_2 + 2NO \rightarrow 2H_2O$ which has rate = $k[H_2][NO]^2$ is _____

(a) mol $L^{-1}s^{-1}$ (b) s^+ (c) $mol^{-2}L^2s^{-1}$ (d) mol L^{-1}

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