WEEKLY EXAM 2080/0

Subject: Chemistry **GRADE XII (SCIENCE)**

Time : 1:30 hrs. **SET B**

Group A [1×10 = 10]

Attempt all the questions:

1. Which of the following transition elements shows the highest oxidation state?
   a) Mn b) Co c) Cr d) Fe
2. Which of the following elements is not a transition elements.
   a) Fe b) Zn c) Cr d) Ag
3. An alkyhalide can be converted into alcohol by
   a) Addition b) Elimination c) Substitution d) Dehydrogenation
4. The order of reactivity of alkylhalides towards a SN_1 reaction is,
   a) 3°>2°>1° haloalkane b) 2°>3°>1° haloalkane
   c) 1°>2°>3° haloalkane d) None
5. Alcoholic beverages are made of
   a) Ethyl alcohol b) Acetic acid c) Formic acid d) None of these
6. Propan-2-ol is
   a) 1° alcohol b) 3° alcohol c) 2° alcohol d) None
7. Friedel Craft's alkylation is
   a) Free radical substitution rx^n b) Electrophilic substitution rx^n
   c) Nucleophilic substitution rx^n. d) Elimination rx^n.
8. What is the equivalent mass of $C_2O_4H_2$ in the following reaction?
   $KMnO_4+C_2O_4H_2+H_2SO_4 \rightarrow MnSO_4+K_2SO_4+CO_2+H_2O$
   a) 90 b) 45 c) 126 d) 31.6
9. The basicity of H_2SO_4 is
   a) $\frac{x}{5}$ b) $\frac{x}{3}$ c) $\frac{x}{2}$ d) x
10. The equivalent weight of crystalline oxalic acid is
    a) 63 b) 53 c) 90 d) 66

Group B [6×5=30]

Attempt all questions;

1. a) Write the possible structural isomers of C_4H_9Br & its IUPAC nomenclature
   b) Identify the compounds (x) & (y) write its IUPAC name also.

$$CH_3-\underset{\displaystyle Br}{\underset{|}{CH}}-CH_3 \xrightarrow[\Delta]{\text{Alc KOH}} x \xrightarrow[\Delta]{\text{HBr}} y$$

[3+2]

2. Write a short note about Markovnikov's & Antimarkovnikov's addition rx^n with examples. [2.5+2.5]
3. How can you distinguish Propan-1ol, Propan-2ol and 2 Methyl Propan-2ol by using Victor Meyer method? [5]
4. Why is zinc not considered as transition elements? Write any four characteristics off transition element. [1+4]
5. Calculate the equivalent weight of underlining compounds from the following reactants. [1×5=5]
   a) $\underline{Fe^{4+}} + Sn^{2+} \longrightarrow Fe^{2+} + Sn^{4+}$
   b) $\underline{Ca(OH)_2} + 2HCl \longrightarrow CaCl_2 + 2H_2O$
   c) $NaOH + \underline{SO_2} \longrightarrow NaHSO_3$
   d) $3NaOH + \underline{H_3PO_4} \longrightarrow Na_3PO_4 + 3H_2O$
   e) $2NaOH + \underline{H_2SO_4} \longrightarrow NaHSO_4 + H_2O$
6. Define Acidity of base? Calculate the equivalent mass of $KMnO_4$ in acidic, basic & neutral medium. [2+3]

All the best