

# WEEKLY EXAM 2080/04

Subject: Chemistry

GRADE XII (SCIENCE)

Time : 1:30 hrs.

SET B

## Group A

[1×10 = 10]

Attempt all the questions:

- Which of the following transition elements shows the highest oxidation state?  
a) Mn b) Co c) Cr d) Fe
- Which of the following elements is not a transition element?  
a) Fe b) Zn c) Cr d) Ag
- An alkylhalide can be converted into alcohol by  
a) Addition b) Elimination c) Substitution d) Dehydrogenation
- The order of reactivity of alkylhalides towards a  $SN_1$  reaction is,  
a)  $3^\circ > 2^\circ > 1^\circ$  haloalkane b)  $2^\circ > 3^\circ > 1^\circ$  haloalkane  
c)  $1^\circ > 2^\circ > 3^\circ$  haloalkane d) None
- Alcoholic beverages are made of  
a) Ethyl alcohol b) Acetic acid c) Formic acid d) None of these
- Propan-2-ol is  
a)  $1^\circ$  alcohol b)  $3^\circ$  alcohol c)  $2^\circ$  alcohol d) None
- Friedel Craft's alkylation is  
a) Free radical substitution  $rx^n$  b) Electrophilic substitution  $rx^n$   
c) Nucleophilic substitution  $rx^n$  d) Elimination  $rx^n$
- 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
- The basicity of  $H_2SO_4$  is  
a)  $\frac{x}{5}$  b)  $\frac{x}{3}$  c)  $\frac{x}{2}$  d) x

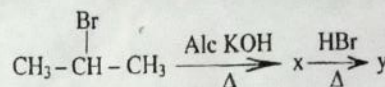
- The equivalent weight of crystalline oxalic acid is  
a) 63 b) 53 c) 90 d) 66

## Group B

[6×5=30]

Attempt all questions;

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



[3+2]

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

20 All the best