Roll Number		

INDIAN SCHOOL MUSCAT
SECOND PERIODIC ASSESSMENT

CHEMISTRY

CLASS: 12 Sub.Code: 043 Time Allotted:30 mts.

03 .05.2021 Max .Marks: 20

GENERAL INSTRUCTIONS:

a. All questions are compulsory.

b. Mark for each question is indicated against it

Following questions are multiple choice type carrying 1 mark each:

1. Which of the following reagents convert propene to Propan-1-ol? 1
   a) H_2O, H_2SO_4 b) Aqueous KOH
   c) $MgSO_4$, $NaBH_4/H_2O$ d) B_2H_6 , H_2O_2/OH^-
2. An organic compound X of molecular formula $C_4H_{10}O$ undergoes oxidation with acidified $KMnO_4$ to give a compound Y of molecular formula $C_4H_8O_2$. X could be 1
   a) $CH_3CH_2CH_2CH_2OH$ b) $CH_3CH_2CH(OH)CH_3$
   c) $CH_3CH=CHCH_2OH$ d) $(CH_3)_3COH$
3. Picric acid is: 1
   a) Trinitrophenol b) Trinitrotoluene
   c) Trinitrobenzene d) Tribromobenzene

In the following questions, a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

A. Both Assertion (A) and Reason (R) are correct statements, and Reason (R) is the correct explanation of the Assertion (A).
B. Both Assertion (A) and Reason (R) are correct statements, but Reason (R) is ***not*** the correct explanation of the Assertion (A).
C. Assertion (A) is correct, but Reason (R) is incorrect statement.
D. Assertion (A) is incorrect, but Reason (R) is correct statement

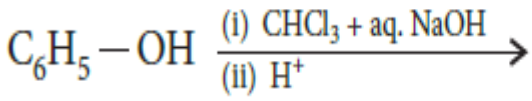
4. Assertion:The pKa of ethanol is lower than that of phenol 1
   Reason: Phenoxide ion is resonance stabilised whereas ethoxide ion is not.

5. Assertion: Ethanol gives the same ester as product when reacted with ethanoic acid, ethanoyl chloride and ethanoic anhydride. 1
Reason: Ethanoic acid, ethanoyl chloride and ethanoic anhydride are all acetylating reagents.

6. Assertion: Bond angle in ethers is greater than the tetrahedral angle. 1
Reason: Steric repulsion between the alkyl groups is greater than the lone pair lone pair repulsions.

Fill in the blanks

7. IUPAC name of $CH_3C(Br)=CHCH_2OH$ is _____ 1

8.  1

Answer the following

9. Give a chemical test to distinguish ethanol and phenol. 1

10. Arrange the following in the increasing order of acidic nature. 1
2,4,6 – trinitrophenol, n-butyl alcohol, 3,5 – dinitrophenol, 4-methylphenol,
tert-butyl alcohol, 2,4-dinitrophenol, ethanol.

11. Reaction of alcohol with acid chloride is carried out in presence of a pyridine. Give reason 1

12. Give the structures of final products expected from the following reactions. 2
    a) Heating of benzyl phenylether with HI
    b) Phenol is treated with $Na_2Cr_2O_7$ and con H_2SO_4

13. Illustrate the following with suitable chemical equations 2
    a) Kolbe's reaction
    b) Williamson's synthesis

14. Convert 2
    a) Benzene to phenol
    b) Ethanal to sec-butyl alcohol

15. Explain the mechanism of acid catalyzed hydration of ethene. 3