Reg. No. : | | | | | | | | | | |

Question Paper Code: 53902

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Chemical Engineering

15UCH302-ORGANIC CHEMISTRY

(Regulation 2015)

Duration: One hour Maximum: 30 Marks

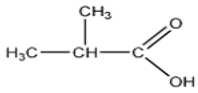
PART A - (6 x 1 = 6 Marks)

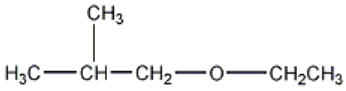
(Answer any six of the following questions)

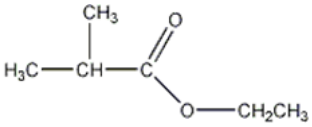
1. Which of the following reaction, the halogenations is involved? CO1- R

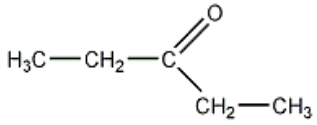
   (a) Addition (b) Substitution (c) Replacement (d) All of the above

2. Which of the following compounds is an ester? CO1- R

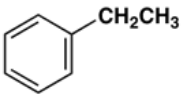
   (a) 

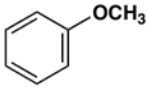
   (b) 

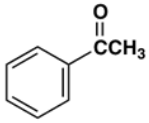
   (c) 

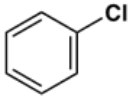
   (d) 

3. Which is most reactive in electrophilic substitution? CO2-R

   (a) 

   (b) 

   (c) 

   (d) 

4. Which of the following is rate determining step in electrophilic substitution reaction? CO2- U

   (a) Generation of electrophile

   (b) Attack by an electrophilic reagent on benzene ring

   (c) Formation of product

   (d) All of the mentioned

5. A reaction in which organic molecules join together along with elimination of water molecule or HCl is called _____. CO3- U

(a) Addition (b) Substitution (c) Condensation (d) Evaporation

6. If acidified Potassium Dichromate(VI) ($K_2Cr_2O_7$) acts as oxidizing agent, color changes from CO3- R

(a) Orange to red (b) Orange to green (c) Yellow to green (d) yellow to red

7. The reaction of carboxylic acids with alcohols catalysed by conc. H_2SO_4 is called _____. CO4- R

(a) Dehydration (b) Saponification (c) Esterification (d) Neutralization

8. The reactive dyes applied to a cellulosic fiber, they form a _____ with hydroxyl group of the fiber. CO4- U

(a) Covalent bond (b) Hydrogen bond (c) Ionic bond (d) Adsorption

9. How many amino acids are synthesized by our bodies? CO5- R

(a) 10 (b) 20 (c) 30 (d) 40

10. A link between amino acid molecules in a poly peptide chain by condensation reaction is called _____. CO5- U

(a) Peptide bond (b) Polypeptide linkage (c) Diol linkage (d) Amine linkage

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain the reaction mechanism of halogenation and nitration in detail. CO1- U (8)

12. Briefly explain the mechanism of the following reactions. CO2 -U (8)

(i) Friedel craft reaction

(ii) Riemer Timenn reaction

13. What are the steps are involved in thermal halogination of alkane? CO3-U (8)

14. Explain the synthesis of dicarboylic acids and unsaturated acids with suitable examples. CO4- U (8)

15. What are amino acids? Discuss briefly the various synthesis methods of amino acids. CO5- U (8)