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Question Paper Code: 53902

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Third Semester

Chemical Engineering

15UCH302-ORGANIC CHEMISTRY

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Which is not present in Grignard reagent? CO1- R
(a) Methyl group (b) Magnesium (c) Halogen (d) -COOH group
- What will be the product for the given reaction? $\text{CH}_3\text{OH} + \text{CO} \rightarrow ?$ CO1- R
(a) Ethyl formate (b) Methyl formate (c) Ethyl acetate (d) Methyl acetate
- Which of the following statements regarding electrophilic aromatic substitution is wrong? CO2- R
(a) Friedel-Crafts alkylation of benzene can be reversible.
(b) Friedel-Crafts alkylation with primary alkyl chloride may involve rearrangement
(c) Friedel-Crafts acylation of nitrobenzene readily gives a meta substitution product.
(d) None of the above
- Condensation reaction is the reverse of which of the following reaction? CO2- R
(a) Lock and key hypothesis (b) Oxidation
(c) Hydrolysis (d) Glycogen formation

5. The other name for the branched chain alkanes is CO3- R
 (a) Paraffins (b) Iso-Paraffins (c) Neo Paraffins (d) Napthenes
6. Which molecule is an example of a ketone? CO3- R
 (a) Ethanol (b) Ethanoic anhydride (c) Propan-2-one (d) Propanamide
7. An azo dye is formed by a interaction of aromatic diazonium chloride with CO4- R
 (a) Phenol (b) Benzene
 (c) Nitrous acid (d) An aliphatic primary amine
8. Ethanol is used as a CO4- R
 (a) Fuel (b) Solvent (c) Catalyst (d) Both a and b
9. Which of the following is an essential amino acid? CO5- R
 (a) Cysteine (b) Asparagine (c) Glutamine (d) Phenylalanine
10. Which of the following cannot denature a protein? CO5- R
 (a) Iodoacetic acid (b) SDS detergent
 (c) Urea (d) Heating to 90°C

PART – B (5 x 2= 10 Marks)

11. What is nitration reaction? CO1- R
12. Write free radical reaction. CO2- R
13. What is polymerization reaction? CO3- R
14. What is congo dye? Give its uses. CO4- R
15. What are amino acids? Give example. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) Define and explain the term in unit operation CO1-U (16)
 (i) Reagents
 (ii) Mechanism
 (iii) Catalyst

Or

- (b) (i) Discuss about the esterification reaction with example CO1-U (8)
- (ii) Give two examples for oxidation and reduction reaction and explain. CO1-U (8)
17. (a) Explain the following CO2-U (16)
- (i) Friedal craft reaction
- (ii) Riemer Tiemann Reaction
- Or
- (b) Explain the following CO2-U (16)
- (i) Benzion condensation
- (ii) Addition HBR on Alkene in presence of peroxide
18. (a) Explain the following CO3-U (16)
- (i) Halogination using N-Bromo succinamide
- (ii) Polymerization reaction
- Or
- (b) Explain the estimation procedure of following CO3-U (16)
- (i) Phenol
- (ii) Glucose
19. (a) Discuss the preparation of different types of alcohol and CO4- U (16)
- unsaturated acids.
- Or
- (b) Write the synthesis and uses of melachite green and methyl CO4- U (16)
- orange.
20. (a) What are proteins? What are the properties of proteins? How CO5- U (16)
- would you classify the proteins on the basis of structure?
- Or
- (b) (i) Write a short note on color reaction of proteins CO5- U (8)
- (ii) Explain any two synthetic methods for amino acids. CO5- U (8)

