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Question Paper Code: 53902

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

Third Semester

Chemical Engineering

15UCH302 - ORGANIC CHEMISTRY

(Regulation 2015)

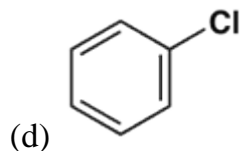
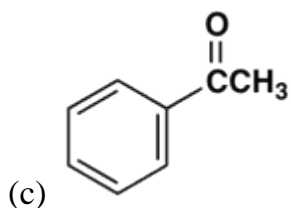
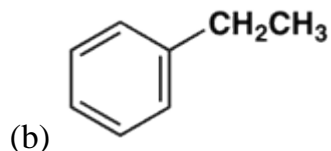
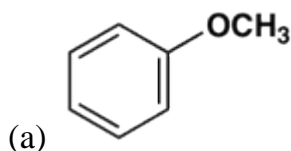
Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Which gives a *meta* nitro compound as the main product upon nitration with a nitric acid-sulfuric acid mixture



2. Which one of the following catalyst is present, when mono-carboxylic acid is heated with an alcohol

(a) carboxylic acid

(b) mineral acids

(c) oxalic acid

(d) formic acid

3. The alkylating agent used in Friedel-Crafts alkylation is

(a) acid chlorides

(b) alkyl halide

(c) alkyl chlorides

(d) acid anhydrides

PART - C (5 x 16 = 80 Marks)

16. Explain nitration and halogenation reactions with suitable mechanisms. (16)

Or

(b) Write the mechanism of the following reaction (i) Esterification (ii) Nitration. (16)

17. (a) Explain in details about the mechanism of the friedel-crafts reactions. (16)

Or

(b) Describe the mechanism of the following: (i) Aldol condensation (ii) Benzion condensation. (16)

18. (a) Explain allylic bromination in the presence and absence of NBS. (16)

Or

(b) (i) Describe the estimation procedure for glucose (8)

(ii) Write the mechanism of oxidation and reduction reaction of alkanes. (8)

19. (a) Write briefly about the synthesis and classification of Azo dyes. (16)

Or

(b) Write briefly about the synthesis and classification of Triphenyl methane dyes. (16)

20. (a) Explain the reaction involve in the following functional group:

(i) carboxyl group (8)

(ii) Amino group (8)

Or

(b) Explain in detail about peptide linkage and end group analysis. (16)

