

This question paper contains 4 printed pages;

Your Roll No.

209

B.Sc. (Prog.)/II

C

CH-202-ORGANIC CHEMISTRY

(Admissions of 2008 and onwards)

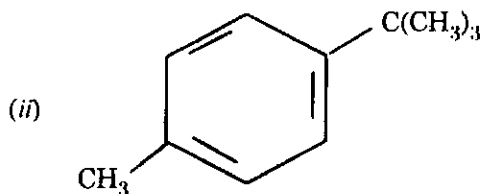
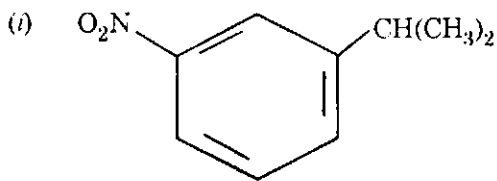
Time : 2 Hours

Maximum Marks : 50

Write your Roll No. in the top inner step on the left of this question paper.

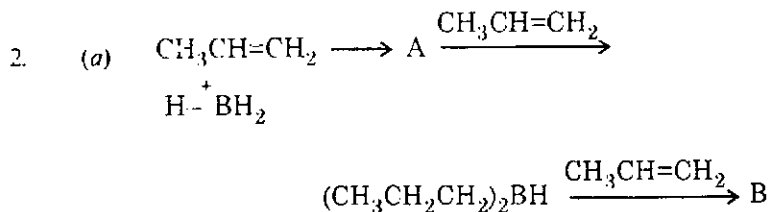
Attempt any *four* questions

1. (a) What happens when a quaternary ammonium hydroxide is heated strongly ? Explain with the help of an example.
- (b) What products would you obtain from the KMnO_4 oxidation of the following compounds ?



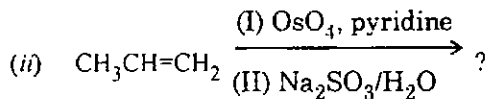
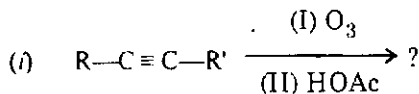
P.T.O.

- (c) HBr can add to propene under different reaction conditions to give isomeric products. Explain. 4½,4,4

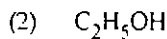
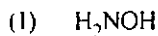


Write the structures of A and B.

- (b) Complete the following reactions :



- (c) (i) Give the structure of the products when acetaldehyde is reacted with :



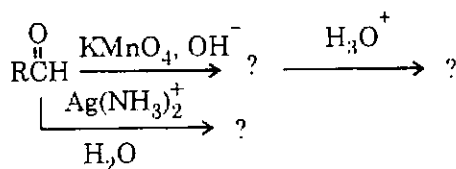
- (ii) Write down the mechanism of the reaction of a primary alcohol with SOCl_2 . 4,4,4½

3. (a) (i) In most Friedel-Crafts acylation the electrophile is an acylium ion. How it can be formed from an acyl halide ?

(ii) Give important limitations of Friedel-Crafts reactions.

(b) How would you prepare 2-pentanone by an acetoacetic ester synthesis ?

(c) Complete the following reaction : 4½,4,4



4. Write notes on the following : 4½,4,4

(i) Pinacol-Pinacolone rearrangement

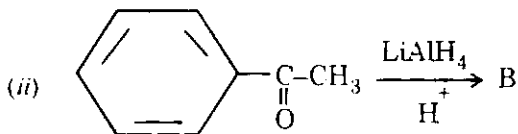
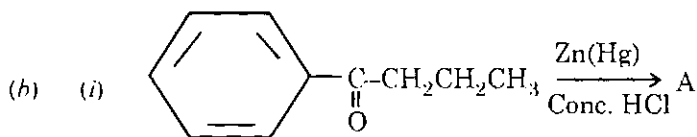
(ii) Benzidine rearrangement

(iii) Perkin reaction

5. (a) (i) What products are obtained when nitrobenzene is reduced in acidic and alkaline mediums, respectively.
- (ii) How would you prepare the following compounds starting from toluene :

(1) *m*-toluidine

(2) *m*-bromotoluene.



Identify A and B.

- (c) Give the mechanism of haloform reaction. What is its synthetic utility ? 4½,4,4