

(To be Submitted to designated email id mentioned below by 13th November 2020)

Semester: II; Subject: Chemistry (Hons); Paper: CC 3

Send your assignments to (email id): brcchemsem2h@gmail.com

Answer all questions

Full Marks: 10

1. What is Rydberg constant? Relate the Rydberg constant of H-atom and He⁺-ion 2
2. 'Electron affinity of Mn(II) is greater than that of Fe(III)' - Explain 2
3. What is the effect of adding KNH₂ to liquid ammonia in respect of acidity? 2
4. Write short explanatory note on Gutmann donar and acceptor numbers 2
5. Arrange and explain with reason the acid strength of BF₃, BCl₃, BBr₃ and BI₃ 2

Semester: II; Subject: Chemistry (Hons); Paper: CC 4

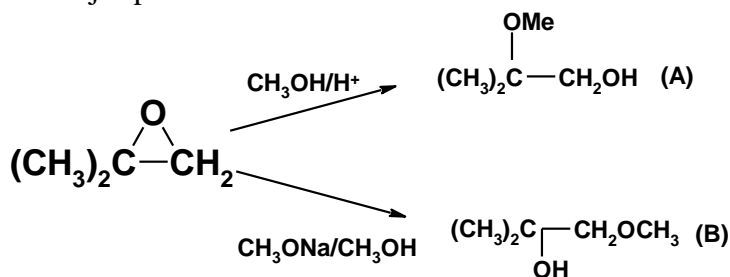
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1. Answer any two (02) of the following questions: (5 x 2 = 10)

- (a) i) Account the following reaction sequence and give three dimensional structures of A to D:

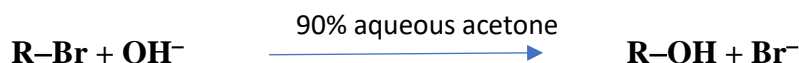


- ii) What is called S_Ni' mechanism? Explain with example. 4+1
- (b) i) Alkaline hydrolysis of Et₂NCH₂CH(Cl)Me produces Et₂NCHMeCH₂OH – Explain.
- ii) Isobutylene oxide reacts with acidic methanol to give the primary alcohol A as the major product, where as it reacts with basic methanol to give the tertiary alcohol B as the major product:



2+3

- (c) i) In the following reaction, an increase in hydroxide ion concentration cause a corresponding increase in the rate of reaction when R = -C₂H₅ but not when R = -C(CH₃)₃. Explain



- ii) Explain what happens when 2,3-dibromobutane is treated with metallic zinc in methanol. 2.5+2.5

Procedure of Appearing in the Internal Examination:

1. Download the question paper from the “online examination” section of the College portal: www.burdwanrajcollege.ac.in
2. Write your assignment on blank white A4 size papers.
3. The assignment must carry the following details of the student:
 - a. Name of the Student
 - b. University Roll Number
 - c. University Registration Number
 - d. Name of the Paper
 - e. Mobile Number of the Student
4. Examinees will have to submit their own hand-written answer scripts electronically to the mail id specified by the College in a single pdf file.
5. On the subject-line of the mail write your Name and University Roll No.