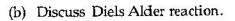
8 . (a)	What is Aron	naticity? E	Explain the	Huckel Rul	e of
	aromaticity.	Discuss	aromatic	structure	of
	benzene.				6



3

- (c) How do you explain the acidic nature of C-H bond in acetylene?
- 9. (a) Discuss SN^1 and SN^2 substitution reaction with example.
 - (b) What are addition-elimination and elimination-addition reaction? Explain with example.
 - (c) Explain why an alkyl halides are more reactive than vinyl chloride?

91559

B. Sc. 2nd Sem. (Mathematics) (Hons.) Old

& New Examination - May, 2016

CHEMISTRY - II Opt (ii)

Paper: BHM-125

Time: Three Hours]

[Maximum Marks: 60

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Attempt five questions in all, selecting not more than two questions from each Section. All questions carry equal marks.

SECTION - I

- 1. (a) What is ionization energy? Why nitrogen have higher ionization energy than oxygen?
 - (b) Define atomic and ionic radii. Discuss the factors affecting these radii.
 - (c) Explain the Diagonal relationship between lithium and magnesium.

91559-10-(P-4)(Q-9)(16)

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2.	(a)	What is diborane? Explain the structure of diborane.						
	(b) (Give two methods of preparation of hydrides. 4						
		What is meant by allotropy? Explain the structure and properties of allotropes of carbon. 4						
3.	(a)	How is electronegativity determined? Give its two application.						
	(b)	Give reasons:						
		(i) Electron affinity of chlorine is higher than that of fluorine.						
		(ii) Ionization energy of Be is higher than that of Mg.2						
	(c)	How is borazine prepared from (i) B_2H_6 , (ii) BCl_3 ?						
	(d)	Write a short note on 'Caros acid'.						
SECTION - II								
4.	(a)	What is rate equation? Discuss factors influencing the rate of reaction? 2,3						
	(b)	Write the integrated rate expression for zero and first order reaction.						
	(c)	Give difference between molecularity and order of reaction.						
5.	(a)	Define the following terms :						
915	59-	-(P-4)(Q-9)(16) (2)						

		(i) Molar conductance,					
		(ii) Equivalent conductance,					
		(iii) Specific conductance.					
		Explain the effect of dilution on these terms. 5					
	(b)	Discuss the elementary treatment of Debye Huckel Onsager equation for strong electrolytes. 4					
	(c)	Explain tre effect of tempertaure on conductivity of metallaic conductors.					
3.	(a)	What is Kohlarausch's Law? Give its application for the determination of molar conductance.					
	(b)	Calculate the pH of 10 ⁻¹⁰ M NaOH solution. 2					
	(c)	Discuss buffer action.					
	(d)		3				
	-	SECTION - III					
7.	(a)	Write the prouct obtained upon dehydration of	of				

(c) Discuss the mechanism of electrophilic addition reaction.