

**End Semester Examinations - 2015-16 Even Semester - May 2016**

**14CH2007 Aliphatic and Aromatic Chemistry**

**Set A**

**Time : 3 hrs**  
**Total Marks: 100**

1. a. What are the essential requirements for aldol condensation to take place? **(2)**
- b. Discuss a method of preparation of **(4X2=8)**
- i. Carboxylic acid
- ii. Ketone
- c. Explain **(5X2 = 10)**
- i. Dieckmann condensation
- ii. Wittig reaction

**OR**

2. a. Why aliphatic amines are more basic than ammonia? **(2)**
- b. Outline a method of preparation of **(4X2 = 8)**
- a
- i. Azine
- ii. Aldehyde
- c. Formulate **(5X2 = 10)**
- i. Hoffmann Bromamide reaction
- ii. Hell-Volhard-Zelinsky reaction

3. a. What are azines? **(3)**
- b. Formulate the **(7)**
- i. Diazo-coupling reaction with aniline
- ii. Clemmensen reduction
- c. Highlight with specific examples the synthetic uses of diazonium salts? **(10)**

**OR**

4. a. What are 'Azo compounds'? **(2)**
- b. Discuss the uses of **(4X2 = 8)**
- i. Amines
- ii. Carboxylic acids
- c. Briefly write on **(5X2 = 10)**

- i. Perkin Condensation      ii. Stevens rearrangement

5. a. Write briefly on the chemical properties of aldehydes and ketones?  
(10)

b. Discuss the synthetic use of Grignard reagent?  
(10)

**OR**

6. a. Discuss any two chemical properties of amines?  
(8)

b. Write short notes  
on (6+6 = 12)

- i. Friedel crafts reaction    ii. Baeyer villager oxidation

7. a. Explain the salient features of  
(5X2 = 10)

- i. Gattermann reaction      ii. Riemeier-Tiemann reaction

a. Discuss the synthetic utility of  
(5X2 = 10)

- i. Sandmeyer reaction      ii. Friedel crafts acylation reaction

**OR**

8. a. Why aromatic amines are less basic than aliphatic amines?  
(4)

b. How is diazonium salt prepared?  
(4)

c. Highlight the salient features of  
(4+4=8)

- i. Aldol condensation      ii. Crossed aldol condensation

d. What are ylides? Give an example.  
(4)

9. **Compulsory**  
(6+7+7 = 20)

Briefly explain the following rearrangements

- i. Curtius Rearrangement  
ii. Benzilic acid Rearrangement  
iii. Fries Rearrangement

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**Wishing you All the Best**

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