

Code No: 07A4BS03

R07**Set No. 2**

II B.Tech II Semester Examinations, APRIL 2011

ORGANIC CHEMISTRY

Chemical Engineering

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

- (a) N,N- Dimethylaniline is a weaker base than 2,6-dimethyl - N,N-dimethyl aniline. Explain why?
 - (b) Which one of the following is a better leaving group and why?
 - i. Chloride ion ; Bromide ion ; Iodide ion. [8+8]
- (a) Define the terms photolysis and thermolysis.
 - (b) Discuss any two advantages of photolysis mechanism over thermolysis.
 - (c) What is allylic bromination? How it can be carried out using NBS? Explain your answer with a suitable example? [5+5+6]
- (a) Discuss the formation of Charge Transfer Complex and Wheland intermediate in the electrophilic substitution reactions of benzene.
 - (b) What happens when p-fluorophenol is refluxed with chloroform in the presence of sodium methoxide in methanol ? [8+8]
- (a) Write the possible structures of tartaric acid and comment on their optical activities.
 - (b) (\pm) 1-Chloro-1-phenylethane on reaction with KCN followed by hydrolysis gives 2- phenylpropionic acid. Formulate the reactions and comment on the optical activity of the products. [8+8]
- (a) Compare the aromaticities of furan and benzene.
 - (b) Discuss the preparation of N-oxides from pyridine and quinoline ring systems. [8+8]
- (a) Discuss the reaction of phenylacetaldehyde with 2-propanone in the presence of aq.NaOH giving mechanism for the formation of the product under refluxing conditions.
 - (b) Describe the reaction of p-fluorobenzaldehyde with potassium cyanide in 50% aq. ethanolic solution. [8+8]
- (a) What is the full structure of Bismark-Brown - R?
 - (b) Summaries the important steps in its synthesis.
 - (c) What are the applications of Bismark-brown-R? [4+8+4]
- (a) Differentiate between plasticized and unplasticized PVC?

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- (b) What is meant by compounding of rubber? Why it is done & how it is achieved? [4+12]

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R07**Set No. 4**

II B.Tech II Semester Examinations, APRIL 2011

ORGANIC CHEMISTRY**Chemical Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

- Compare the aromaticities of furan and benzene.
 - Discuss the preparation of N-oxides from pyridine and quinoline ring systems. [8+8]
- Discuss the formation of Charge Transfer Complex and Wheland intermediate in the electrophilic substitution reactions of benzene.
 - What happens when p-fluorophenol is refluxed with chloroform in the presence of sodium methoxide in methanol ? [8+8]
- Define the terms photolysis and thermolysis.
 - Discuss any two advantages of photolysis mechanism over thermolysis.
 - What is allylic bromination? How it can be carried out using NBS? Explain your answer with a suitable example? [5+5+6]
- Differentiate between plasticized and unplasticized PVC?
 - What is meant by compounding of rubber? Why it is done & how it is achieved? [4+12]
- What is the full structure of Bismark-Brown - R?
 - Summarises the important steps in its synthesis.
 - What are the applications of Bismark-brown-R? [4+8+4]
- N,N- Dimethylaniline is a weaker base than 2,6-dimethyl - N,N-dimethyl aniline. Explain why?
 - Which one of the following is a better leaving group and why?
 - Chloride ion ; Bromide ion ; Iodide ion. [8+8]
- Write the possible structures of tartaric acid and comment on their optical activities.
 - (±) 1-Chloro-1-phenylethane on reaction with KCN followed by hydrolysis gives 2- phenylpropionic acid. Formulate the reactions and comment on the optical activity of the products. [8+8]
- Discuss the reaction of phenylacetaldehyde with 2-propanone in the presence of aq.NaOH giving mechanism for the formation of the product under refluxing conditions.

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- (b) Describe the reaction of p-fluorobenzaldehyde with potassium cyanide in 50% aq. ethanolic solution. [8+8]

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R07**Set No. 1**

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ORGANIC CHEMISTRY**Chemical Engineering****Time: 3 hours****Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Differentiate between plasticized and unplasticized PVC?
 (b) What is meant by compounding of rubber? Why it is done & how it is achieved? [4+12]
2. (a) Compare the aromaticities of furan and benzene.
 (b) Discuss the preparation of N-oxides from pyridine and quinoline ring systems. [8+8]
3. (a) Write the possible structures of tartaric acid and comment on their optical activities.
 (b) (\pm) 1-Chloro-1-phenylethane on reaction with KCN followed by hydrolysis gives 2- phenylpropionic acid. Formulate the reactions and comment on the optical activity of the products. [8+8]
4. (a) Discuss the formation of Charge Transfer Complex and Wheland intermediate in the electrophilic substitution reactions of benzene.
 (b) What happens when p-fluorophenol is refluxed with chloroform in the presence of sodium methoxide in methanol ? [8+8]
5. (a) What is the full structure of Bismark-Brown - R?
 (b) Summarises the important steps in its synthesis.
 (c) What are the applications of Bismark-brown-R? [4+8+4]
6. (a) N,N- Dimethylaniline is a weaker base than 2,6-dimethyl - N,N-dimethyl aniline. Explain why?
 (b) Which one of the following is a better leaving group and why?
 i. Chloride ion ; Bromide ion ; Iodide ion. [8+8]
7. (a) Discuss the reaction of phenylacetaldehyde with 2-propanone in the presence of aq.NaOH giving mechanism for the formation of the product under refluxing conditions.
 (b) Describe the reaction of p-fluorobenzaldehyde with potassium cyanide in 50% aq. ethanolic solution. [8+8]
8. (a) Define the terms photolysis and thermolysis.
 (b) Discuss any two advantages of photolysis mechanism over thermolysis.

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- (c) What is allylic bromination? How it can be carried out using NBS? Explain your answer with a suitable example? [5+5+6]

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R07**Set No. 3**

II B.Tech II Semester Examinations, APRIL 2011

ORGANIC CHEMISTRY

Chemical Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

- What is the full structure of Bismark-Brown - R?
 - Summarises the important steps in its synthesis.
 - What are the applications of Bismark-brown-R? [4+8+4]
- Write the possible structures of tartaric acid and comment on their optical activities.
 - (\pm) 1-Chloro-1-phenylethane on reaction with KCN followed by hydrolysis gives 2- phenylpropionic acid. Formulate the reactions and comment on the optical activity of the products. [8+8]
- Discuss the formation of Charge Transfer Complex and Wheland intermediate in the electrophilic substitution reactions of benzene.
 - What happens when p-fluorophenol is refluxed with chloroform in the presence of sodium methoxide in methanol ? [8+8]
- N,N- Dimethylaniline is a weaker base than 2,6-dimethyl - N,N-dimethyl aniline. Explain why?
 - Which one of the following is a better leaving group and why?
 - Chloride ion ; Bromide ion ; Iodide ion. [8+8]
- Compare the aromaticities of furan and benzene.
 - Discuss the preparation of N-oxides from pyridine and quinoline ring systems. [8+8]
- Define the terms photolysis and thermolysis.
 - Discuss any two advantages of photolysis mechanism over thermolysis.
 - What is allylic bromination? How it can be carried out using NBS? Explain your answer with a suitable example? [5+5+6]
- Discuss the reaction of phenylacetaldehyde with 2-propanone in the presence of aq.NaOH giving mechanism for the formation of the product under refluxing conditions.
 - Describe the reaction of p-fluorobenzaldehyde with potassium cyanide in 50% aq. ethanolic solution. [8+8]
- Differentiate between plasticized and unplasticized PVC?

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- (b) What is meant by compounding of rubber? Why it is done & how it is achieved? [4+12]

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