Code No: NR210802 **NR** **Set No. 2**

II B.Tech I Semester Examinations,November 2010
ORGANIC CHEMISTRY
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How will you confirm the presence of the following groups in Glucose?
   i. Aldehydic group.
   ii. Hydroxyl group. [4+4]
   (b) Give the Haworth structure for β D fructo furanose. [8]
2. (a) How will you prepare pyridine? Explain how it undergoes electrophilic substitution reactions. [5+5]
   (b) Compare the oxidation reactions of Quinoline and Isoquinoline with alkaline $KMnO_4$. [6]
3. Give the preparation and uses of the following dye.
   (a) Bismark brown.
   (b) Fluoroscien.
   (c) Congo Red. [5+5+6]
4. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction? [6+2]
   (b) Write a note on E and Z configurations of geometrical isomens. [8]
5. (a) Explain the following applications of Inductive effect.
   i. Effect of bond lengths.
   ii. Dipole moment.
   iii. reactivity of alkyl halide. [3+3+3]
   (b) Discuss the strength of carboxylic acid based upon Inductive effect. [7]
6. Write a detailed note on Perkin reaction with mechanism. [16]
7. (a) Discuss about Hell-volhard zelinsky reduction with its mechanism.
   (b) Describe the applications of above reaction. [8+8]
8. (a) Draw the structure of the optical isomers of lactic acid and assign R and S notation with the help of sequence rule. [4+4]
   (b) How many asymmetric carbon atoms are present in tartaric acid? How many active forms of tartaric acids exist? [4+4]

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Code No: NR210802 **NR** **Set No. 4**

II B.Tech I Semester Examinations,November 2010
ORGANIC CHEMISTRY
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Discuss about Hell-volhard zelinsky reduction with its mechanism.
   (b) Describe the applications of above reaction. [8+8]
2. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction? [6+2]
   (b) Write a note on E and Z configurations of geometrical isomens. [8]
3. Write a detailed note on Perkin reaction with mechanism. [16]
4. Give the preparation and uses of the following dye.
   (a) Bismark brown.
   (b) Fluoroscien.
   (c) Congo Red. [5+5+6]
5. (a) How will you confirm the presence of the following groups in Glucose?
      i. Aldehydic group.
      ii. Hydroxyl group. [4+4]
   (b) Give the Haworth structure for β D fructo furanose. [8]
6. (a) Explain the following applications of Inductive effect.
      i. Effect of bond lengths.
      ii. Dipole moment.
      iii. reactivity of alkyl halide. [3+3+3]
   (b) Discuss the strength of carboxylic acid based upon Inductive effect. [7]
7. (a) Draw the structure of the optical isomers of lactic acid and assign R and S notation with the help of sequence rule. [4+4]
   (b) How many asymmetric carbon atoms are present in tartaric acid? How many active forms of tartaric acids exist? [4+4]
8. (a) How will you prepare pyridine? Explain how it undergoes electrophilic substitution reactions. [5+5]
   (b) Compare the oxidation reactions of Quinoline and Isoquinoline with alkaline $KMnO_4$. [6]

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Code No: NR210802 **NR** **Set No. 1**

II B.Tech I Semester Examinations,November 2010
ORGANIC CHEMISTRY
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) How will you confirm the presence of the following groups in Glucose?
   i. Aldehydic group.
   ii. Hydroxyl group. [4+4]
   (b) Give the Haworth structure for β D fructo furanose. [8]
2. (a) Explain the following applications of Inductive effect.
   i. Effect of bond lengths.
   ii. Dipole moment.
   iii. reactivity of alkyl halide. [3+3+3]
   (b) Discuss the strength of carboxylic acid based upon Inductive effect. [7]
3. (a) Discuss about Hell-volhard zelinsky reduction with its mechanism.
   (b) Describe the applications of above reaction. [8+8]
4. (a) Draw the structure of the optical isomers of lactic acid and assign R and S notation with the help of sequence rule. [4+4]
   (b) How many asymmetric carbon atoms are present in tartaric acid? How many active forms of tartaric acids exist? [4+4]
5. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction? [6+2]
   (b) Write a note on E and Z configurations of geometrical isomens. [8]
6. (a) How will you prepare pyridine? Explain how it undergoes electrophilic substitution reactions. [5+5]
   (b) Compare the oxidation reactions of Quinoline and Isoquinoline with alkaline $KMnO_4$. [6]
7. Write a detailed note on Perkin reaction with mechanism. [16]
8. Give the preparation and uses of the following dye.
   (a) Bismark brown.
   (b) Fluoroscien.
   (c) Congo Red. [5+5+6]

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Code No: NR210802 **NR** **Set No. 3**

II B.Tech I Semester Examinations,November 2010
ORGANIC CHEMISTRY
Chemical Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Draw the structure of the optical isomers of lactic acid and assign R and S notation with the help of sequence rule. [4+4]
   (b) How many asymmetric carbon atoms are present in tartaric acid? How many active forms of tartaric acids exist? [4+4]
2. (a) Discuss about Hell-volhard zelinsky reduction with its mechanism.
   (b) Describe the applications of above reaction. [8+8]
3. (a) How will you confirm the presence of the following groups in Glucose?
      i. Aldehydic group.
      ii. Hydroxyl group. [4+4]
   (b) Give the Haworth structure for β D fructo furanose. [8]
4. (a) How maleic acid and fumaric acid react with acetyl chloride? What inference you get from this reaction? [6+2]
   (b) Write a note on E and Z configurations of geometrical isomens. [8]
5. Write a detailed note on Perkin reaction with mechanism. [16]
6. Give the preparation and uses of the following dye.
   (a) Bismark brown.
   (b) Fluoroscien.
   (c) Congo Red. [5+5+6]
7. (a) Explain the following applications of Inductive effect.
      i. Effect of bond lengths.
      ii. Dipole moment.
      iii. reactivity of alkyl halide. [3+3+3]
   (b) Discuss the strength of carboxylic acid based upon Inductive effect. [7]
8. (a) How will you prepare pyridine? Explain how it undergoes electrophilic substitution reactions. [5+5]
   (b) Compare the oxidation reactions of Quinoline and Isoquinoline with alkaline $KMnO_4$. [6]

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