This question paper contains 3 printed pages]

Your Roll No ... .

5172

B.Sc. Prog. / III J

CH-302 – ORGANIC CHEMISTRY

(NC – Admissions of 2008 & onwards)

Time : 2 Hours **Maximum Marks : 50**

(Write your Roll No on the top immediately on receipt of this question paper)

Attempt any **four** questions

1. (a) Draw the Haworth projection formula for α-D-(+) – glucopyranose.

   (b) How is the size of the ring structure in glucose determined ?

   (c) How will you convert ?

   D-(–)-Ara ———→ D-(+)-glucose

   (Arabinose) **4, 4, 4**

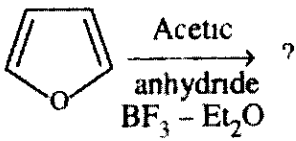
2. (a) How can the azalactone synthesis be used for preparing phenylalanine ?

   (b) Deabbreviate · t-BOC & D C C & discuss their use in peptide chemistry

(c) How many classes of natural amino acids are known ? Give one example of each type **4, 4, 4**

3 (a) Pyridine is called a "π-excessive" system, while Pyrrole is termed as a "π-deficient" system Why ?

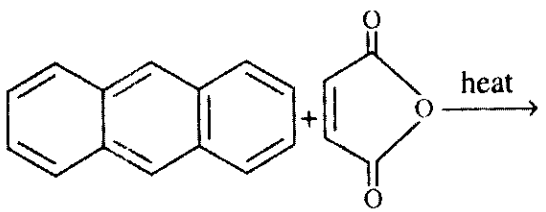
(b) Does Furan exhibit the diene character ?

(c) 

4, 4, 4

4 (a) What is the evidence for the bicyclic nature of naphthalene ?

(b) What is the azo dye test ? Discuss

(c) 

4,4,4

5 (a) What is Bakelite ?

(b) How will you prepare polystyrene ?

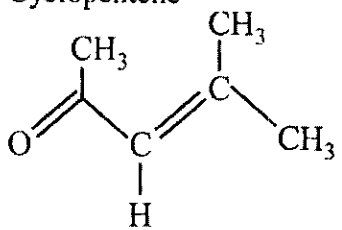
(c) Discuss the preparation of polyurethanes. **4, 4, 4**

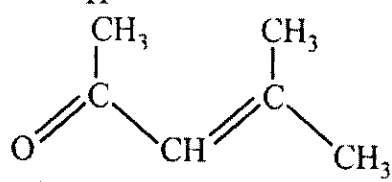
6. (a) Identify the electronic transitions in the following compounds

(i) Acetaldehyde

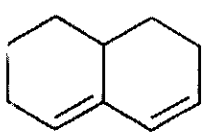
(ii) Methyl vinyl ether

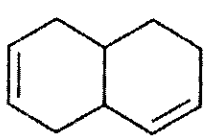
(iii) Cyclopentene

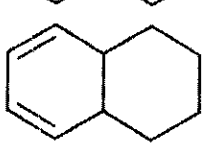
(iv) 

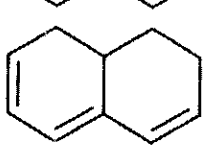
i e 

(b) Based on their UV spectra, how will you differentiate between .

(i) 

(ii) 

(iii) 

(iv) 

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