V. P. AND R. P. T. P. SCIENCE COLLEGE
VALLABH VIDYANAGAR
B. Sc. INTERNAL EXAMINATION- 2014 (VIth SEMESTER)
SUBJECT : ORGANIC CHEMISTRY
COURSE CODE : US06CCHE01

DATE : 10-03-2014 TIME : 3.30 p.m. TO 5.00 p.m.
DAY : MONDAY TOTAL MARKS : 30

Q. 1 ANSWER THE FOLLOWING (ANY THREE) 6

(i) Give the synthesis of 2-napthylamine from napthalene.

(ii) Napthalene contains two fused benzene rings.

(iii) Allylic system has special stability.

(iv) Give the difference between exo and endo.

(v) Give the requisites for a true dye.

(vi) Define: Reducing sugars. Give at least two name of reducing sugar and non reducing sugar.

Q. 2 ANSWER THE FOLLOWING

(I) Draw all the resonance hybrid structures for phenanthrene and antracene. 4

(ii) Give the name of few carcinogenic hydrocarbons and how do they induce cancer? 4

OR

Q. 2 ANSWER THE FOLLOWING

(i) Nitration of napthalene takes place mainly at α-position exclusively. 4

(ii) Give the synthesis of 1,4,6-trimethyl napthalane from benzene using any aliphatic and inorganic reagents. 4

Q.3 ANSWER THE FOLLOWING

(i) What are the pericyclic reactions? Write the characteristics of pericyclic reaction. 3

(ii) Predict the product and give appropriate stereochemistry. 5

(a) Trans-5,6-dimethyl-1,3-cyclohexadiene + heat $\rightarrow$?

(b) 1,3-butadiene + light $\rightarrow$?

OR [P.T.O.]

Q. 3 ANSWER THE FOLLOWING

(i) Giving suitable example, discuss the Diels-Alder reaction with favourable condition. Which class of pericyclic reaction it belongs? 4

(ii) [2+2] cycloaddition is thermally difficult but [4+2] cycloaddition is thermaly easy. 4

Q. 4 ANSWER THE FOLLOWING

(i) Give supporting facts for Cyclic structure of D-(+)-glucose. 4

(ii) Give the characteristics properties of fluorescent brighteners. 4

OR

Q. 4 (i) **Give the synthesis of following**

(a) D-(+)-Glucose from (-)-arabinose. 2

(b) D-(−)-Lactic acid fromD-(+)-Glyceraldehyde. 2

(ii) What is dye? Give the synthesis and applications of dye which used for coloring food from the cheapest raw material. 4

THE END