

CHEMICAL SYNTHESIS AND PROCESS TECHNOLOGIES  
 Paper - Module 25 : Photochemistry  
 (Admissions of 2008 and onwards)

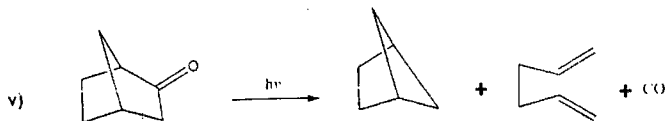
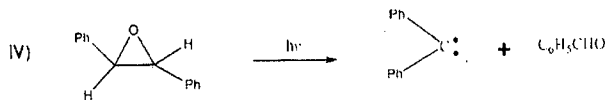
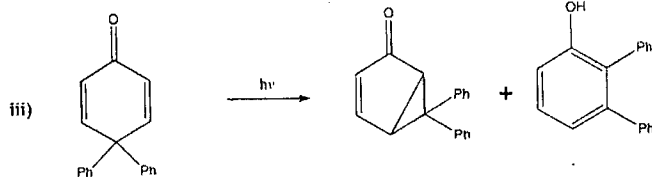
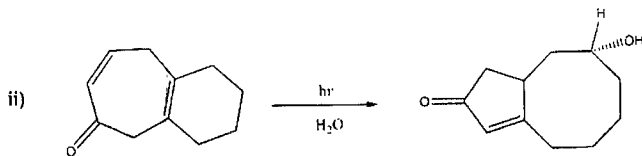
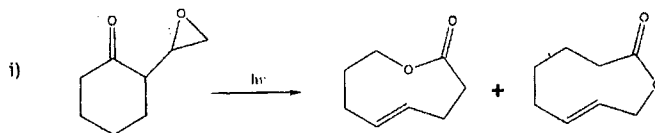
Time : 2 hours

Maximum Marks :38

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

Attempt all questions.

1. (a) Write down the probable mechanism for the following reaction. (5 x 2=10)



b) Write the short notes on : ( Any three)

( 3 x 3 = 9)

i) Cis-trans isomerisation

ii) Norrish type-II reaction

iii) Ene reaction

iv) Barton reaction

Q.2 Explain Woodward -Hoffman rules for electrocyclic reaction with help of correlation diagram for Cyclohexadiene -hexatriene system. (5)

Q.3 Using Frontier Molecular Orbital meth , discuss selection rules for Electrocyclic and cycloaddition reactions. (6)

Q.4. (a) What is Sigmatropic reaction? Give suitable examples of [1,3], [1,5] and [2,3]-Sigmatropic reactions. (5)

(b) Write down the short note on Hoffman-Loeffler-Freytag reaction. (3)