

M.Phil. Science Examination

Paper-III : Chemistry 603 EO Advanced Organic Chemistry

Time : 3 Hours]

May-2017

[Max. Marks : 70

- Que. 1 Answer the followings 14
Give the disconnection and possible route for the synthesis of any three the following molecules.
- a) Imidazole
 - b) Pyridazine
 - c) Bisabilline
 - d) Warfarine
 - e) Lycorane
- Que. 2 Answer any three of the followings 14
- a) Discuss the hydrolysis of nucleic acid. Give a brief account on the structure of nucleosides.
 - b) Write a brief note on protein synthesis.
 - c) Write brief note on nucleotide.
 - d) Write a note on DNA replication.
 - e) Give names and structures of purine and pyrimidine bases present in DNA. Discuss hydrogen bonding between them.
- Que. 3 Discuss any three name reaction with suitable example and it's mechanism from the followings : 14
- a) Asymmetric Aldol-condensation
 - b) Stork enamine reaction
 - c) Alder-ene reaction
 - d) Sharpless epoxidation
 - e) Robinson annulation
- Que. 4 Write a note on any three name reactions. 14
- a) Biginelli reaction
 - b) Doebner quinolone synthesis
 - c) Bischler-Nepiralski reaction
 - d) Knorr pyrazole synthesis
 - e) Pterno-Buchi reaction
- Que. 5 Answer any three of followings. 14
- a) Write a brief not on disconnection approach.
 - b) Discuss Hurdmore reaction for 1,3,4-thiadizole synthesis with its mechanism.
 - c) Give reaction and mechanism of Fischer Indole synthesis.
 - d) Give synthesis of Adenosine and Uridine.
 - e) Discuss the structure of ATP, ADP and AMP.

(P.T. 6)