SUMMARY

In the present investigation, N-[phthalimido]-acetoxy, o-,m-, and p-benzoyloxy phthalimides (III a-d) were obtained from the reaction of phthaloxime (I) with phthalimidoacetyl chloride, o-,m-, and p-phthalimidobenzoyl chlorides (II a-d).

N-[phthalimido]-acetoxy phthalimide (III a) undergoes hydrolysis with (70 %) H_2SO_4 to give a mixture of phthalic acid (IV) and glycine (V).

N-[phthalimido]-acetoxy phthalimide (III a) undergoes base-catalyzed ring opening with aromatic amines and aminobenzoic acids to give the corresponding N-aryl-phthalimides (VI a-g) and anilides (VII a-g).

Similarly (III a), reacts with hydrazine hydrate in fluxing benzene to give mixture of phthalhydrazide (VIII), and N-phthalimidoacetic acid hydrazide (IX); and with phenyl hydrazine to give a mixture of N-anilino-phthalimide (X) and phthalimidoacetyl phenylhydrazine (XI).

N-[phthalimido]-acetoxy phthalimide (III a) undergo acid catalyzed ring opening with anhydrous aluminium chloride (2 moles) in the presence of reactive aromatic substrates to give the corresponding mixtures of 4-aryl-2,3,1-benzoxazone (XII a-c) and the corresponding aryl-phthalimidomethyl ketone (XIII a-c)..

Also (III a) react with (6 moles) anhydrous aluminium chloride in the presence of reactive aromatic substrates to give the corresponding mixtures of o-aryl-anilides (XIV a-c) and aryl-phthalimidomethyl ketones (XIII a-c).

And Also, in the present invistigation, benzoyloxy phthalimide was introduced of phthalimido moiety in o-,m-, and p-position to see their effects on the mode of the reactions and also to see the bulky effects of o-,m-, and p-substitution on the mode of reaction.

Also; N-[phthalimido]-benzoyloxy phthalimides (III b-d) undergo hydrolysis with (70 %) H_2SO_4 to give a mixture of phthalic acid (IV) and the corresponding aminobenzoic acid (XV a-c).

N-[Phthalimido]-benzoyloxy phthalimides (III b-d) undergo base-catalyzed ring opening with aromatic amines and aminobenzoic acids to give the corresponding N-aryl-phthalimides (VI a-u) and anilides (XVI a-u).

Similarly (III b-d) react with hydrazine hydrate to give the corresponding mixture of phthalhydrazide (VIII) and N-[phthalimido]-o-,m-, and p-benzoic acid hydrazide (XVII a-c); and with phenyl hydrazine to give a mixture of N-anilinophthalimide (X) and the corresponding phthalimidobenzoyl phenylhydrazines (XIX a-c).

N-[phthalimido]-benzoyloxy phthalimides (III b-d) undergo acid-catalyzed ring opening with anhydrous aluminium chloride (2 moles) in the presence of reactive aromatic substrates to give a mixture of 4-phenyl-2,3,1-benzoxazones (XII a-c) and N-[aroylphenyl]-phthalimides (XX a-c),(XXI a-c),(XXII a-c).

Also, (III b-d) react with (6 moles) anhydrous aluminium chloride in the presence of reactive aromatic substrates to give the corresponding mixtures of o-aroylanilides (XIV a-c) and N-[aroylphenyl]-phthalimides (XX a-c),(XXI a-c),(XXII a-c).