studies on cyclic imides

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-In the present investigation, N-(phthalimido]-acetoxy, o-jrn-, and p benzoyloxyphthalimides (III a-d) were obtained from the reaction of phthaloxime(I) -with phthalimidoacetyl chloride, o-vm-, and p-phthalimidobenzoyl chlorides(II a d).N-[phthalimido]-acetoxy phthalimide (III a) undergoes hydrolysis with(70 %) H2SOlf to give a mixture of phthalic acid (IV) and glycine (V).N-[phthalimido]-acetoxy phthalimide (III a) undergoes base-catalyzedring -opening with aromatic amines and aminobenzoic acids to give the correspondingN aryl-phthalimides (VI a-g) and anilides (VII a-g).Similarly (III a), reacts with hydrazine -hydrate in fluxing benzene togive mixture of phthalhydrazide (VIII), and N phthalimidoacetic acid hydrazide(IX); and with phenyl hydrazine to give a mixture of N-anilino-phthalirnide(X) and phthalimidoacetyl phenylhydrazine (XI).N-(phthalimido]-acetoxy phthalimide (III a) undergo acid catalyzedring opening with anhydrous aluminium chloride (2 moles) in the presenceof reactive aromatic substrates to give the corresponding mixtures of If-aryl-2,3,I-benzoxazone (XII a-c) and the corresponding aryl-phthalimidomethylketone (XIII a-c) •.Also (III a) react with (6 moles) anhydrous aluminium chloride in thepresence of reactive aromatic -substrates to give the corresponding mixturesof o-aryl-anilides (XIV a-c) and aryl phthalimidomethyl ketones (XIII a-c).-ii-And Also, in the present invistigation, -benzoyloxy phthalimide wasintroduced of phthalimido moiety in o-,m-, and p position to see their effectson 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 hydrolysiswith (70 %) H2S04 to give a mixture of phthalic acid (IV) and the correspondingaminobenzoic -acid (XV a-c).N-[Phthalimido]-benzoyloxy phthalimides (III b-d) undergo base catalyzedring opening with aromatic amines and aminobenzoic acids to give the correspondingN-aryl-phthalimides (VI a-u) and anilides (XVI a-u),Similarly (III b-d) react with hydrazine hydrate to give the correspondingmixture of phthalhydrazide (VIII) and N-[phthalimido]-o-,m-, and p-benzoicacid hydrazide (XVII a-c); and with phenyl hydrazine to give a mixtureof N-anilinophthalimide (X) and the -corresponding phthalimidobenzoyl phenylhydrazines(XIX a c).N-[phthalimido]-benzoyloxy phthalimides (III b-d) undergo acid-catalyzedring opening with anhydrous aluminium chloride (2 moles) in the presenceof reactive aromatic substrates to give a mixture of 4-phenyl-2,3,I-benzoxazones(XII a-c) and N-[aroylphenyJ]-phthalimides (XX a-c),(XXI a-c),(XXII a-c).Also, (III b-d) react with (6 moles) anhydrous aluminium chloride inthe presence of reactive aromatic substrates to give the correspondingmixtures of o-uroylanilides (XIV a-c) and

N-[aroylphenyJ]-phthalimides