Let Et is be a sequence of connected subspaces of X, s.t AnnAnn + & Bor all M. Show that UAn is connected. Assume U, V is a separation of UAn. let a EA, and assume that a e U. Then by lemma 23.2 A, CU. Assuming that U contains An then as I a ∈ AnnAnt, V also contains Ann. Thus U= UAn -> V= & which contradets our assumption 5