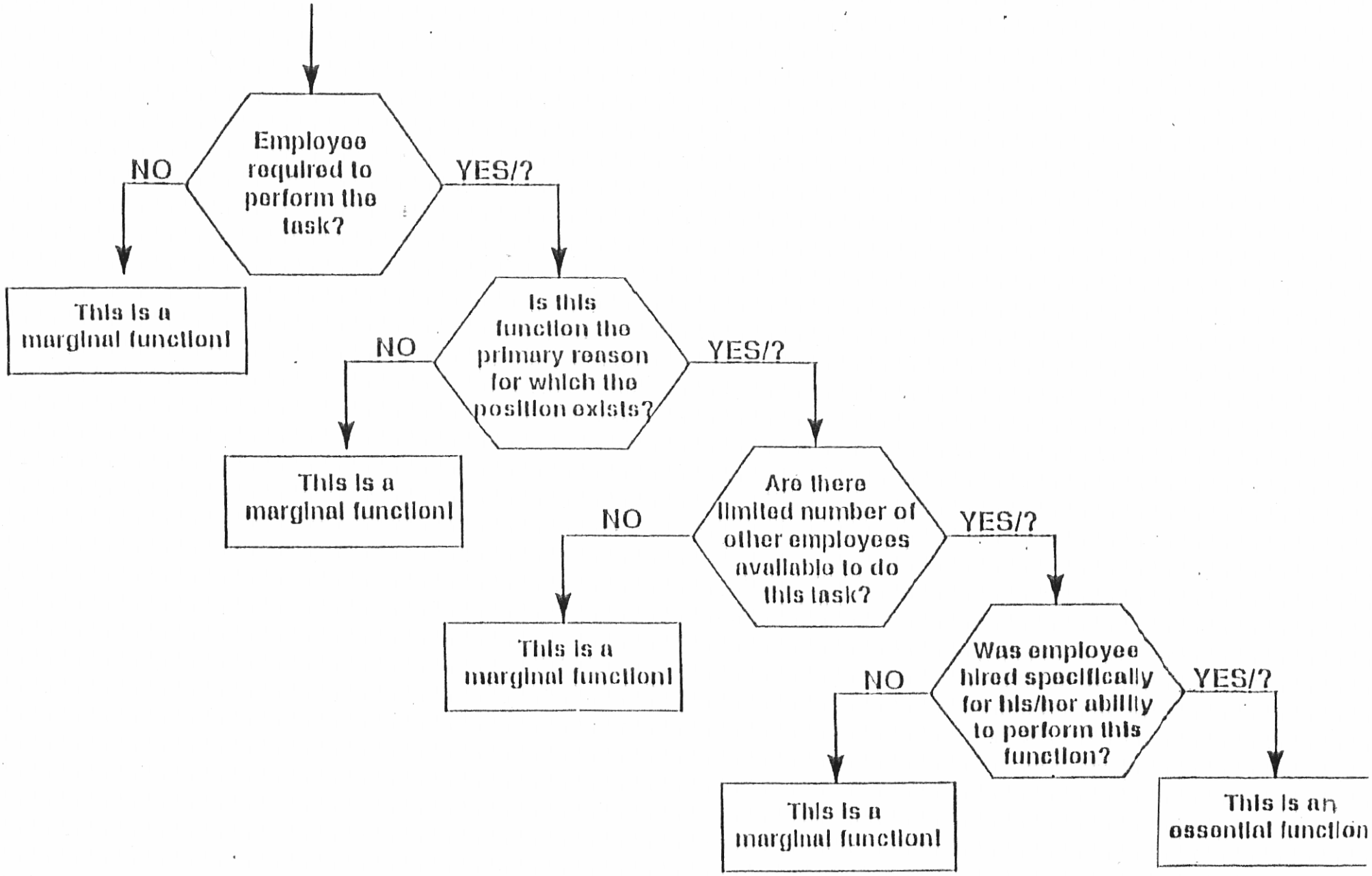ESSENTIAL FUNCTIONS FLOW CHART