Real-Time Operating Systems

1   Question

Show an example in which EDF provides some advantages respect to fixed priorities.

2 Question

Consider the following task set: $\Gamma = \{\tau_1 = (20, 40, 40), \tau_2 = (35, 100, 100), \tau_3 = (40, 80, 80), \tau_4 = (25, 75, 75)\}$. Is it schedulable on a dual-processor system running a POSIX compliant OS with kernel latency $L = 5$? Motivate your answer.

3 Question

Describe the differences between PI and HLP, commenting the advantages and drawbacks of the two algorithms.

4   Question

Describe the "threaded interrupt handling" mechanism, and how it is useful to reduce the kernel latency.