**OPERATING SYSTEM – ASSIGNEMENT IV – V sem**

1. Explain Pthread scheduling with the help of a C program
2. Consider the following page reference string:
   1. 1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6.
   2. Show the state of the frame after referencing each page and number of page faults for
      1. first in first out – 3 frames
      2. Least recently used – 4 frames
      3. Least frequently used – 4 frames.
3. **a.** Explain copy on write with the help of a diagram. What is the advantage?

**b.** Explain buddy system with the help of a diagram.

1. **a.** On a system using demand paging, it takes 200ns to satisfy a memory request if the page is in the memory. If the page is not in the memory, it takes 7ms if a free frame is available or the page to be swapped out is not been modified. It takes 15ms if there and no free frames and the page to be swapped out, is modified. What is the effective access time if the page fault rate is 5% and 60% of the time the page to be replaced has been modified?

**b.** What is Belady’s anomaly? Which algorithms don’t suffer from Belady’s anomaly?

1. What is thrashing? Explain working set model and Page fault frequency with the help of a diagram.