Quiz 4
Operating Systems and Networks
IIIT Hyderabad
Time: 30 minutes; Max. Marks: 24

Note: Give a brief and correct answer. **Mention your name and roll number on the answer sheet. Answer the question after writing the FIRST 10 WORDS OF THE QUESTION ALONG WITH THE QUESTON NUMBER in the answer sheet.**

1. UNIX is unsuitable for real-time applications because a process executing in kernel mode may not be interrupted. Elaborate. [4]

2. A time-sharing operating system uses priority-based scheduling for time-critical processes, and round-robin scheduling for interactive user processes. At some point, the hardware is upgraded by replacing the CPU with a functionally equivalent model that is twice as fast. Discuss the changes that different classes of users (interactive, batch, and time critical) will experience. [10]

3. Consider a system implementing multilevel queue scheduling. What strategy can a computer user employ to maximize the amount of CPU time allocated to the user's process? [4]

4. Discuss how the following pairs of scheduling criteria conflict is certain settings (i) CPU utilization and response time (ii) I/O device utilization and CPU utilization.[6]