

Quiz 5
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 QUESTION NUMBER in the answer sheet.**

1. What is the purpose of “turnstile” synchronization tool in Solaris ? [5]
2. Identify whether the following statement is TRUE or FALSE. If the statement is FALSE, correct it and justify the corrected sentence. If the statement is TRUE, justify it. Restrict the justification to a few sentences: “Deadlock prevention protocols improve CPU utilization” [5]
3. Jurassic Park consists of a dinosaur museum and a park for safari riding. There are “m” passengers and “n” single-passenger cars. Passengers wander around the museum for a while, then line up to take ride in a safari car. When a car is available, it loads the one passenger it can hold and rides around the park for a random amount of time. If the “n” cars are all out riding passengers around, then the passenger who wants to ride waits; if a car is ready to load but there are no waiting passengers, then the car waits. Give a solution (Pseudo Code) with semaphores to synchronize the “m” passenger processes and the “n” car processes. [14]