

Quiz 6
Operating Systems and Networks
IIT 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 dynamic loading and dynamic linking ? Many modern OSs will dynamically load parts of the operating system. Give one example of a part of the operating system that would be a very good candidate for dynamic linking, and give one example of a part of the operating system that you would not want to dynamically load ? [6]
2. Assume a page size of 4Kbytes and that a page table entry takes 4 bytes, how many levels of page tables would be required to map a 64-bit address space, if the top level page fits into a single page.[6]
3. Developments in operating systems have generally occurred in an evolutionary rather than revolutionary fashion. For the following transition, describe the primary motivations of operating systems designers that led them to produce the new type of system from the old: **Contiguous storage allocation systems to non-contiguous storage allocation systems.** [6]
4. Explain the problems if you swap a process with pending I/Os. [6]