Quiz 6
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. 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]**

2. Explain the problems if you swap a process with pending I/Os. [6]

3. Given memory partitions (holes) of 100K, 500K, 200K, 300K and 600 K (in order), how would each of the First-fit, Best-fit, and Worst-fit algorithms place processes of 212K, 417K,112K and 426K (in order) ? Which algorithm makes efficient use of memory ? [6]

4. 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]