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. State and explain two major advantages of paged virtual memory over the base/limit register method of memory mapping. [6]

2. A small computer has 8 page frames, each containing a page. The page frames contain virtual pages A, C, G, H, B, L, N and F in that order. Their respective load times were 18, 23, 5, 7, 32, 19, 3 and 8. Their reference bits are 1,0,1,1,0,1,1 and 0 and their modified bits are 1,1,1,0,0,0,1 and 1, respectively. What is the order that enhanced-second chance considers pages and which one is selected? [6]

3. Explain its positive and negative aspects of inverted page table approach. When it is used ? [6]

4. A computer has a cache, main memory, and a disk used for virtual memory. If a referenced word is in cache, 20 nsec are required to access it. If it is in main memory but not in cache, 60 nsec are needed to load into the cache, and then the reference is started again. The cache hit ratio is 90%. What is the effective access time?[6]