UNIT-III

5. a) A computer lan 32 bit virtual address and 4 kb pages. The program and data together fit in the lowest page. The stack fits in the highest page. How many entries are needed in the page table is traditional (one level) paging is used. How many page table entries are needed for two level paging with 10 bit in each part 4

   b) Explain the organization page table for the above problem in detail 8

OR

6. Discuss how LRC and FIFO page replacement algorithms can be implemented on the following reference string when the numbers of frames is 4. Also calculate the number of page faults.
   1,0,2,2,1,7,6,7,0,1,2,0,3,0,4,5,1,5,2,4,5,6,7,6,7,2,4,2,7,3,3,2,3 12

UNIT-IV

7. Discuss different layer in Input / Output softwares 12

OR

8. a) Write short note on the following:
      i) Memory mapped I/O Vs I/O mapped I/O
      ii) Organization of RAID
      iii) Universal Asynchronous receiver transmitters
      iv) Soft timer 8

   b) Discuss deadlock prevention mechanisms 4

UNIT-V

9. a) Define trusted systems 4

   b) Discuss the issues involved in shared files 8

OR

10. a) Explain logical dump algorithm for file system dump 6

    b) Explain in detail disk scheduling algorithms 6

[April-13]

[EURCS 404/EURIT 404]

B.Tech. Degree Examination

CSE & IT
IV SEMESTER

OPERATING SYSTEMS

(Effective from the admitted batch 2007–08)

Time: 3 Hours **Max.Marks: 60**

Instructions: Each Unit carries 12 marks.
Answer all units choosing one question from each unit.
All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

UNIT-I

1. a) Explain process and file management using WIN 32 API in windows 6
   b) Discuss batch and time sharing systems 6

OR

2. Explain the procedure to implement
   a) Thread in users pale b) Threads in Kernel
   c) Hybrid approach 12

UNIT-II

3. a) Explain the solution to Dining philosopher problem 8
   b) Define mutual exclusive with busy wait 4

OR

4. a) Define TSL instruction and give a solution using TSL to mutual exclusive problem and compare with Peterson solution 8
   b) Discuss briefly priority in version problem 4