

Code No: V3222

R07**Set No. 1****III B.Tech II Semester Supplementary Examinations, April - 2017****OPERATING SYSTEMS**
(Computer Science Engineering)**Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions**
All Questions carry equal marks

- 1 a) What is a distributed system? Discuss its advantages over a centralized system. [8]
b) Describe the structure of operating system. [8]
- 2 a) Compare and contrast process with thread. [6]
b) Discuss the merits and demerits of kernel-space threads. [5]
c) How are threads handled in Windows? Give an example. [5]
- 3 a) What is a critical section? Suggest any two solutions for critical section problem. [8]
b) Explain the concept of monitors for process synchronization. [8]
- 4 a) Consider the following page string and three page frames to explain the page replacement algorithms (i) LRU (ii) Optimal page replacement. [10]
1, 2, 3, 4, 1, 2, 5, 1, 2, 3, 4, 5.
b) Discuss the address translation concept for virtual memory. [6]
- 5 a) What is a deadlock? Discuss the conditions to hold good for occurrence of deadlock. [8]
b) How are input requests transformed in to hardware operation? Explain with examples. [8]
- 6 a) Explain tree-structured directories and directed acyclic directories [8]
b) How free space is managed in Unix operating system? Explain with an example [8]
- 7 a) Make a comparison of SCAN, C-SCAN and C-LOOK disk scheduling algorithms. [8]
b) Discuss the characteristics of RAID level 5 and RAID level 6. [8]
- 8 a) What are the various approaches for user authentication? Explain with illustrations. [8]
b) Discuss the role of access matrix in providing protection to the system. [8]
