Code No: NR410502 **NR**

IV B.Tech I Semester Supplementary Examinations, November 2006
DISTRIBUTED SYSTEMS
(Common to Computer Science & Engineering, Information Technology and Electronics & Computer Engineering)

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Differentiate between the monolithic kernel and micro kernel approaches for designing a distributed operating system. State the relative advantages and disadvantages.
   (b) Why are distributed operating system more difficult to design than operating systems for centralized time-sharing system? [12+4]
2. (a) Elucidate the main differences between a LAN and a WAN.
   (b) Why are medium-access control protocols needed? What properties must a good medium-access-control protocol have? [8+8]
3. Discuss the strategies used to handle deadlocks and their applicability to distributed systems. [16]
4. (a) Discuss the issues that has to be considered in allocating processors to processes in a distributed system.
   (b) Discuss the hierarchial, heuristic and the bidding algorithm for processor allocation. [8+8]
5. (a) Write about Satyanarayanan's observation on file usage in a distributed system. How it is useful in implementation of a file system.
   (b) Compare write through and write once protocols. [8+8]
6. (a) Explain about Dash(Directory Architecture for shared memory)
   (b) How **NUMA** multiprocessor differ from other multiprocessor. [8+8]
7. (a) Does a process know that a port it is reading from is actually a port set? Does it matter?
   (b) Illustrate the concept of Thread in Mach OS. [6+10]
8. (a) What is the need for distributed file system (in DCE)
   (b) Discuss the main features of distributed file system(in DCE) [8+8]

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