Hall Ticket No | | | | | | | | | | | Question Paper Code: BCS004

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

M.Tech II Semester End Examinations (Supplementary) - January, 2019

Regulation: IARE–R16

DISTRIBUTED OPERATED SYSTEM

(Computer Science and Engineering)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Explain the grid and hypercube topologies of Switched Multicomputers. **[7M]**
   (b) Describe the concept of client server model. **[7M]**
2. (a) Using parameter passing technique, explain the procedure to compute the sum(4, 7) remotely. **[7M]**
   (b) Draw the Open Systems Interconnection (OSI) reference model and explain in detail. **[7M]**

UNIT – II

3. (a) Describe the purpose of Election algorithm in distributed systems and exusing a ring. **[7M]**
   (b) Explain how mutual exclusion can be implemented in distributed systems using distributed algorithm. **[7M]**
4. (a) Compare the wait-die deadlock prevention algorithm and the wound-wait deadlock prevention algorithm. **[7M]**
   (b) Explain how clock synchronization is achieved in Berkeley UNIX. **[7M]**

UNIT – III

5. (a) Discuss the four ways of disk usage of work station model in distributed operating system. **[7M]**
   (b) Write the scheduling algorithm in distributed system with example. **[7M]**
6. (a) Discuss the four ways of disk usage of work station model in distributed operating system. **[7M]**
   (b) Compare distributed file system and trends in distributed file system. **[7M]**

UNIT – IV

7. (a) Discuss the Ring-Based Multiprocessors concept for distributed shared memory conflicts. Give any two differences with bus based multiprocessors. **[7M]**
   (b) Explain the page based distributed shared memory with example **[7M]**

8. (a) What is PRAM consistency. Consider the following code for three processes that run in parallel on three different processors. **[7M]**

a=1	b=1	c1
printf(b,c)	print(a,c)	print(a,b)
(a)	(b)	(c)

Write Statement execution as seen by three processes.

(b) Write the shared variables in distributed systems in detail. **[7M]**

UNIT – V

9. (a) Discuss about UNIX emulation implementation of threads in MACH. **[7M]**

(b) Draw and explain the abstract model for UNIX emulation using Mach. **[7M]**

10. (a) Draw the structure of Mach process and discuss its functionality. **[7M]**

(b) Explain the UNIX emulation in MACH with example. **[7M]**

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