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Question Paper Code :

**ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES  
(AUTONOMOUS)**

M.E/M.Tech I-Semester Regular Examinations, November 2015

**Advances in Operating System  
(Computer Science & Technology)**

**Date:**

**Time: 3 hours**

**Max Marks: 60**

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**Answer ONE Question from each Unit**

**All Questions Carry Equal Marks**

**All parts of the question must be answered in one place only**

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**Unit-1**

- 1) A) What is a dead lock? (4M)  
B) Explain the synchronization mechanism in operating system with the help of an algorithm? (8M)

(OR)

- 2) A) What is meant by deadlock detection? (2M)  
B) State the conditions for which a dead lock state occurs. Which tool/ model you will use to know the dead lock happened. Explain the steps to be taken once the system is found to be in dead lock state. (8M)

**Unit-2**

- 3) A) Describe the casual ordering of messages? (4M)  
B) Describe Lamport's algorithm for logical ordering of clocks? (8M)

(OR)

- 4) A) List the differences between token based and non-token based algorithms? (4M)  
B) Explain all the operations of Suzuki-kasami broadcast algorithm (8M)

**Unit-3**

- 5) A) List out the dead lock handling strategies in distributed operating system? (4M)  
B) Describe about centralized-deadlock detection algorithms? (8M)

(OR)

- 6) A) What are the functions of agreement protocols in distributed operating system? (4M)  
B) Explain the classification of agreement protocols in detail? (8M)

**Unit-4**

- 7) A) Mention the issues in load distribution? (4M)  
B) Discuss the design issues of coherence protocols? (8M)  
(OR)
- 8) A) What are the issues in distributed scheduling? (4M)  
B) Explain distributed file system in detail? (8M)

**Unit-5**

- 9) A) What is meant by fault tolerance? (4M)  
B) Explain dynamic voting protocols? (8M)  
(OR)
- 10) A) What is error recovery? (4M)  
B) Elaborate the check pointing issues in distributed data base systems. (8M)