

Code No: 51551

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Tech I Semester Examinations, April - 2015

ADVANCED OPERATING SYSTEMS

(Embedded Systems)

Time: 3hrs

Max.Marks: 60

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 8 marks and may have a, b, c as sub questions.

**PART - A**

5 × 4 Marks = 20

- 1.a) Explain about instruction execution.
- b) What are the different types of editors available in Unix?
- c) Explain about named pipes.
- d) What do you mean by group communication?
- e) Explain about atomic transactions in distributed systems.

**PART - B**

5 × 8 Marks = 40

2. Explain operating system as resource manager. [8]  
**OR**
3. What are different types of operating systems? Explain their features? [8]
4. Explain grep, egrep, fgrep command with examples. [8]  
**OR**
5. Explain about input/output redirection with an example. [8]
- 6.a) What is a system call? What are the system calls used for process creation and termination? Explain.  
b) Explain about name spaces. [4+4]  
**OR**
- 7.a) Explain about file and record locking.  
b) Explain about sockets. [4+4]
- 8.a) Write hardware concepts of distributed systems.  
b) Explain bus-based multiprocessors and bus-based multi computers. [4+4]  
**OR**
- 9.a) Distinguish between distributed operating system and network operating system.  
b) Explain about client-server model. [4+4]
10. Explain Lamports algorithm for clock synchronization. [8]  
**OR**
11. Explain deadlocks in distributed operating systems. [8]