

Code No: 09A60402

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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD**

**B. Tech III Year II Semester Examinations, May – 2013 Operating Systems**

**(Electronics and Communications Engineering)**

**Time: 3 hours Max. Marks: 75**

**Answer any five questions All questions carry equal marks**

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1. a) How a systems call is different from a function call? Explain how system calls are implemented.  
b) Give the classification of systems calls. Elaborate about file-related category. [15]
2. a) Distinguish a thread from a process with illustration.  
b) Explain how these process and threads concepts are implemented in UNIX, Linux, and Windows operating systems. [15]
3. Explain Critical-Section Problem (CCSP) through bounded buffer Producer Consumer Problem. [15]
4. a) Compare logical memory concepts used in paging and segmentation.  
b) Explain how page tables are implemented. [15]
5. a) Write the Deadlock Avoidance Algorithm. Discuss how it is different from deadlock prevention.  
b) Mention and brief the three deadlock handling approaches. [15]
6. a) Write about disk-based file allocation methods.  
b) List and distinguish the various disk file access methods. [15]
7. Write briefly notes on the following:

a) RAID structure

b) Disk scheduling.

[15]

8. aa) What is the concept of Access Matrix?

b) Explain how the access matrix is implemented. Write their pros and cons.

[15]

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