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B.E. (FULL-TIME) DEGREE END SEM EXAMINATIONS April/May 2011  
ELECTRICAL AND ELECTRONICS ENGINEERING  
IV SEMESTER (REGULATION 2008)  
**EE9029 OPERATING SYSTEMS**

Time: 3 Hours

Max. Marks: 100

Answer ALL Questions

**PART – A (10 x 2 = 20 Marks)**

- 1 What is the kernel?
- 2 What are the use of job queues, ready queues and device queues?
- 3 What is preemptive and non preemptive scheduling?
- 4 What are conditions under which a deadlock situation may arise?
- 5 What do you mean by best fit and worst fit?
- 6 What are the attributes of a file?
- 7 What is swap space? What is its use?
- 8 What are the advantages of DMA?
- 9 What is Access matrix?
- 10 How does Windows XP allocate user memory?

**PART – B (5 x 16 = 80 Marks)**

- 11 a (i) Discuss the various security threats  
(ii) Compare the features of windows and Linux operating system.
- 12 a (i) What are the system components of an operating system and explain them?  
(ii) What is the purpose system call and system program? Explain the "system call" with an example.  
**OR**  
b (i) List five services provided by an operating system. Explain how each provides convenience to the users. Explain also in which cases it would be impossible for user level programs to provide these services.  
(ii) Discuss: Layered approach. What is the main advantage of the layered approach to system design? What are the disadvantages of using the layered approach?

- 13 a (i) Explain about inter process communication.  
(ii) List and explain the various OS scheduling algorithm

OR

- b (i) Explain Client-Server communication with an example  
(ii) What is shared data problem? Explain with an example ,  
how to solve the shared data problem
- 14 a (i) List and explain the various page replacement  
algorithms used for page replacement?  
(ii) Explain the basic concepts of segmentation
- OR
- b (i) Explain Linux File system  
(ii) Explain the various Directory structures
- 15 a (i) Differentiate Scan Vs C-Scan and Look Vs C-Look  
(ii) What is RAID? Explain its various levels
- OR
- b (i) List the various Disk-Scheduling Algorithm. How to  
Select a Disk-Scheduling Algorithm  
(ii) Describe about Removable Disks