Seventh Semester B.E. Degree Examination, June/July 2011
Operating Systems

Time: 3 hrs.   Max. Marks:100

Note: *Answer FIVE full questions selecting*
at least TWO questions from each part.

PART – A

1 a. Define operating system. Explain the two views of an operating system. **(10 Marks)**
   b. Name and explain any five operating system services. **(10 Marks)**

2 a. Define process. Explain the different states of a process with diagram. **(10 Marks)**
   b. Explain the benefits of multithreaded programming. **(10 Marks)**

3 a. What are the circumstances that force CPU scheduling to take place? **(06 Marks)**
   b. Explain Round-Robin scheduling Algorithm. **(08 Marks)**
   c. What are the criteria to select the algorithm for c.p.u. scheduling? **(06 Marks)**

4 a. What are the necessary conditions which characterize the deadlock? Explain those conditions. **(08 Marks)**
   b. Describe deadlocks in terms of system resource allocation graph. **(12 Marks)**

PART – B

5 a. Explain the concept of overlays for two-pass assembler. **(08 Marks)**
   b. What is paging? Explain paging hardware with TLB. **(12 Marks)**

6 a. Describe the following allocation algorithms:
       i) First fit   ii) Best fit   iii) Worst fit. **(10 Marks)**
   b. Explain the cause of thrashing. **(10 Marks)**

7 a. Tabulate the functions of different files with their usual extension. **(10 Marks)**
   b. Explain File system mounting with diagrams. **(10 Marks)**

8 a. Explain different network topologies with diagram. **(10 Marks)**
   b. Explain the components of Unix system. **(10 Marks)**

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