MSI-COA

(Please write your Exam Roll No.) *Exam Roll No.* 00614 92008

END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-2010

Paper Code: BCA 208	***Subject: Operating Systems***
Paper ID: 20208	
Time : 3 Hours	***Maximum Marks : 75***

Note: Question 1 is compulsory. Attempt any four questions from the rest.

Q1. (a) What is the difference between parallel and distributed system? Discuss in brief. **(3)**

(b) What do you mean by a process? Discuss its states in brief. **(3)**

(c) Define the difference between preemptive and non-preemptive scheduling. **(3)**

(d) Is it possible to have a dead lock involving only one process? Explain your answer. **(3)**

(e) What are the conditions that lead to a dead lock? **(4)**

(f) Discuss file attributes in brief. **(3)**

(g) Discuss layered form of a file system. **(3)**

(h) What are the three main purposes of an operating system? **(3)**

Q2. (a) How is frames allocation among various processes? Discuss. **(6.5)**

(b) What are the activities that take place when a computer system, say PC is powered on? **(6)**

Q3. (a) Discuss continuous memory allocation to processes. **(6.5)**

(b) Discuss LRU page replacement algorithm. **(6)**

Q4. (a) Describe shortest-Job-First scheduling algorithm. **(6.5)**

(b) What are the mechanism to evaluate an algorithm related to CPU scheduling? Discuss any one of them. **(6)**

Q5. (a) Describe the Dining –Philosophers problem and provide its solution. **(6.5)**

(b) How will you handle synchronization problem using hardware instructions? Discuss. **(6)**

Q6. (a) What are the services provided by Kernal I/O sub system? Discuss any two of them. **(6.5)**

(b) Describe Disk formatting. **(6)**

Q7. (a) Discuss Banker's algorithm. **(6.5)**

(b) What is a resource allocation graph? Why is it needed? Discuss. **(6)**

Q8. (a) How will you protect files of a user from other user in a computer? Discuss. **(6.5)**

(b) Describe directory structure of a file system. **(6)**

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