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Name.....

Reg. No.....

FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, DECEMBER 2006

CS/IT 2K 505—OPERATING SYSTEMS

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

1. (a) What is a process ? What are the components in it ? What primities are available in OS functions to create and execute processes ?

   (b) What is an open system ? What strategies are adopted for achieving the goals of open system ?

   (c) With a simple processor scheduling model, explain the strategies for selecting the processes by a schedule.

   (d) What is a semaphore ? With an example, explain how it can be used for critical section problem.

   (e) What are the various strategies used to allocate space to processes competing for memory in dynamic memory allocation.

   (f) How address translation takes place in virtual memory systems ?

   (g) Explain the contiguous allocation strategy adopted to map files into physical storage blocks.

   (h) Write notes on authentication mechanisms.

(8 × 5 = 40 marks)

Part B

2. (a) Discuss in detail the various operating system strategies for providing different kinds of services.

Or

   (b) What are the four basic modules of operating system ? Explain them in detail.

3. (a) Explain how process abstraction and resource abstraction are handled by process manager of operating system.

Or

   (b) Explain how a deadlock can be detected in a system and strategies for recovering from deadlock.

4. (a) Discuss in detail how dynamic address relocation can be done by the memory manager.

Or

   (b) What is paging ? Explain in detail the working of paged memory management.

5. (a) Explain any *two* ways by which access matrix can be implemented for authorization.

Or

   (b) Enumerate the salient features of WINDOWS NT in detail.

(4 × 15 = 60 marks)