

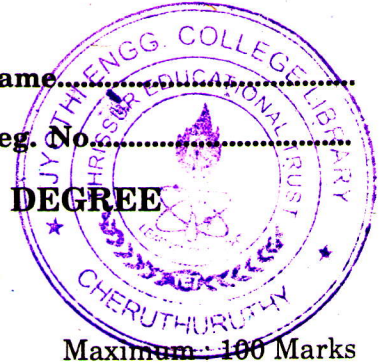
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Name.....

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 primitives 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)