

D 51551

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Name.....

Reg. No.....



**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, DECEMBER 2008**

IT/CS 2K 505—OPERATING SYSTEMS

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

- I. (a) Explain how user mode programs can request for Kernel services.
(b) What is interrupt driven I/O ? Explain.
(c) What are critical sections ? Explain how two processes co-operate to enter critical section.
(d) What is process descriptor ? Explain.
(e) Differentiate between fixed and variable partition memory strategies.
(f) What is address space mapping ? Explain.
(g) Write a brief note on authorization mechanisms.
(h) What are inverted files ? Explain.

(8 × 5 = 40 marks)

- II. (a) Briefly explain about device drivers.

(15 marks)

Or

- (b) (i) Discuss in detail about threads and processes.
(ii) Explain clearly batch processing Technology.

(10 marks)

(5 marks)

- III. (a) Explain how dead lock is prevented and avoided ?

(15 marks)

Or

- (b) Briefly discuss how interacting programs communicate and synchronize between them with semaphore. Give example.

(15 marks)

- IV. (a) Briefly discuss about allocation strategy in paging.

(15 marks)

Or

Turn over

(8 marks)

(7 marks)

(b) (i) Explain clearly working set algorithm.

(ii) Explain in detail Belady's optimal algorithm.

V. (a) Briefly discuss about the following : —

(5 marks)

(i) Structured files.

(5 marks)

(ii) Access Control List.

(5 marks)

(iii) Directory structure.

Or

(15 marks)

(b) Discuss in detail Block allocation structure.

[4 × 15 = 60 marks]