C 59319

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Name.....

Reg. No.....

FIFTH SEMESTER B. TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2009

CS/IT 04 503 – OPERATING SYSTEMS

(2004 Admissions)

Time : Three Hours

Maximum : 100 Marks

Answer **all** *questions.*

Part A

I. (a) Explain about device management.

(b) Explain the operating system organization.

(c) State the necessary conditions for the occurrence of a deadlock and explain it.

(d) What are the various process states? Depict process state diagram.

(e) Explain Dynamic memory allocation.

(f) Differentiate Segmentation from Paging.

(g) Explain any *two* components of Unix Operating system.

(h) Explain about memory mapped files.

(8 × 5 = 40 marks)

Part B

II. (a) Classify devices based on accessing data. Explain their working in detail.

Or

(b) Write short notes on :

(i) Processes and Threads.

(ii) Device drivers.

(8 + 7 = 15 marks)

III. (a) With relevant examples, discuss any *two* Preemptive and Non-preemptive CPU scheduling algorithm of your choice.

Or

(b) How deadlock can be detected and recovered? Explain.

(15 marks)

Turn over

IV. (a) Discuss in detail on Virtual memory implementation.

Or

(b) Explain the implementation of Pagin with neat diagram.

(15 marks)

V. (a) Explain the various file directory structures.

Or

(b) (i) State and discuss the basic principles of process management in Microsoft Windows NT.

(ii) Discuss how process scheduling is done in Unix Operating system.

(8 + 7 = 15 marks)

[4 × 15 = 60 marks]