

13. Explain how swapping and paging are used for memory management in UNIX system. Discuss the advantages and disadvantages of these methods.
14. Briefly explain the set of services provided by the NT executive.
15. Briefly explain the Linux file system.

Register Number :

Name of the Candidate :

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B.Sc. DEGREE EXAMINATION, 2011

(COMPUTER SCIENCE)

(SECOND YEAR)

(PART - III)

(PAPER - VIII)

220/250/210. OPERATING SYSTEM

[(Common with B.Sc.(I.T.), B.C.A. & Double Degree)]

(Including Lateral Entry)

December] [Time : 3 Hours

Maximum : 100 Marks

PART - A (8× 5=40)

Answer any EIGHT questions.

ALL questions carry equal marks.

1. Briefly explain the terms multiprogramming, multitasking and multiprocessing.

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2. What are the needs for buffering? Describe various buffering schemes in detail.
3. Explain how multiple processes share the segments in a segmented memory system with suitable diagram.
4. What is a file system? Describe the basic file operations in detail.
5. Briefly explain the history of UNIX system.
6. What is a system call? Explain various system calls related to process control in UNIX.
7. Discuss why moving the graphics code in NT from user mode to kernel mode would decrease the reliability of the system and how does this violate the original design goals for NT?
8. What is WIN 32 API? Describe the main aspects of WIN 32 API.
9. What are the advantages and disadvantages of contiguous and non-contiguous memory allocation?

10. What are the advantages and disadvantages of dynamic linkages of libraries compared to static linkage?

PART - B (3× 20=60)

Answer any THREE questions.

ALL questions carry equal marks.

11. (a) What is a process? Describe the life cycle of a process in detail.
- (b) What is PCB? Describe the content of the PCB and its uses in process context swithing.
12. Consider the page reference string: 1, 2, 3, 4, 5, 3, 4, 1, 6, 7, 8,7, 8, 9, 7, 8, 9, 5, 4 and 5. How many page faults would occur for the following replacement algorithms when the number of frames is three?
 - (a) LRU replacement.
 - (b) FIFO replacement.
 - (c) Optimal replacement.

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