Register Number: …………………

B.E DEGREE EXAMINATIONS: NOV/DEC 2010

Fourth Semester

COMPUTER SCIENCE AND ENGINEERING

U07CS403: Operating System

Time: Three Hours   **Maximum Marks: 100**

Answer all questions:-

PART A (10 x 1 = 10 Marks)

1. A cache is a small fast memory placed between

   a) Processor and Main memory   b) Main memory and Auxiliary memory

   c) Processor and I/O device   d) Main memory and I/O device

2. A critical section of a program segment

   a) Which should run in a certain specified amount of time

   b) Which avoids dead locks

   c) Where the shared resources are identified

   d) Which must be enclosed by the pair of semaphore operations , P and V

3. Paged segmentation is used in

   a) Memory Management   b) File management   c) Both 1 and 2   d) Processor scheduling

4. An I/O processor is also called as

   a) Co processor   b) Channel   c) DMA   d) Associate processor

5. The scheme wherein the required portion of code is bought into main memory when it is needed is called as

   a) Segmented memory allocation   b) Demand Paged allocation

   c) Single contiguous allocation   d) Fragmentation

6. In UNIX OS, i - node is used in

   a) Identifying a File   b) Identifying a process

   c) Identifying a super block   d) Identifying a terminals

7. The term 'the principle of locality' is used in

   a) Memory management   b) Process Management

   c) File management   d) Device management

8. Devices are added to file system by using

   a) Segmentation   b) Linking   c) Mounting   d) Paging

9. Swap space is allocated in

   a) Primary memory   b) Buffer Cache   c) Secondary memory   d) None of the above

10. Pipe is

   a) a file whose data can be modified   b) a file whose data cannot be modified

   c) a file which stores device related information   d) a file which keeps i node list

PART B (10 x 2 = 20 Marks)

11. What is multiprocessing?
12. Write note on real time system.
13. Why does the CPU scheduling be required?
14. List out various states of the process.
15. Give the storage placement methods.
16. Compare physical record and logical record.
17. What is file server?
18. What is spooling system?
19. What is network operating system? Give example.
20. What is kernel?

PART C (5 x 14 = 70 Marks)

21. a) Explain the characteristics of various computer systems.
(OR)
   b) What is a Process and explain about Inter Process Communication.

22. a) Discuss in detail about pre-emptive scheduling with suitable example.
(OR)
   b) Explain usage of semaphore and its implementation.

23. a) What is dead lock? Explain Banker's algorithm.
(OR)
   b) Explain segmentation with paging with example.

24. a) Explain LRU page replacement alogorithm.
(OR)
   b) Explain indexed file allocation with example.

25. a) Explain about file system implementation & directory implementation.   (7+7)
(OR)
   b) (i) Explain about spooling and device reservation.   (7)
      (ii) Explain the structure of Unix file system.   (7)

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