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Reg. No. 805

Name... Kailasa P. S.

B.C.A. DEGREE (C.B.C.S.S.) EXAMINATION, OCTOBER 2017

Fifth Semester

Core Course—OPERATING SYSTEMS

(2013 Admission onwards)

Time : Three Hours

Maximum Marks : 80

Part A

Answer all questions.

1 mark each.

1. What is multitasking ?
2. What is the use of bootstrap program ?
3. Define dynamic loading.
4. What is context switch ?
5. What is critical section ?
6. Define Process.
7. What is spinlock ?
8. What is the use of MMU ?
9. What is unified virtual memory ?
10. What is the use of inverted page table ?

(10 × 1 = 10)

Part B

Answer any eight questions.

2 marks each.

11. What is CPU scheduling ?
12. Distinguish between symmetric multiprocessing and asymmetric multiprocessing.
13. What is monitor call ?
14. Distinguish between job and program.
15. What are the different process states ?
16. Distinguish between ready queue and device queue.

Turn over

17. How do you implement Semaphores ?
18. Distinguish between load Time and Compile time.
19. What are the attributes of a file ?
20. Distinguish between resource fork and data fork.
21. Write the structure of a file system.
22. Distinguish between Paging and Segmentation.

(8 × 2 = 16)

Part C

Answer any six questions.

4 marks each.

23. What are the different types of OS ?
24. What are the contents of task control block ?
25. Distinguish between job scheduler and CPU schedules.
26. Write an algorithm to solve critical section problem for N processes.
27. What is memory fragmentation ? What is the solution to it ?
28. What are the different steps to execute a program ?
29. Explain demand paging.
30. What are the different file operations ?
31. What are the classical problems of synchronization ?

(6 × 4 = 24)

Part D

Answer any two questions.

15 marks each.

32. Why does OS is known as resource manager ? What are the functions of it ?
33. Define deadlock. What are the different methods to handle deadlocks ?
34. Explain different page replacement algorithms ?
35. What are the different methods of allocating disk space ?

(2 × 15 = 30)