C 21125 (Pages : 2) Name.....

Reg. No.....

SIXTH SEMESTER B.C.A. DEGREE EXAMINATION, MARCH 2017

(CUCBCSS—UG)

BCA 6B 15—OPERATING SYSTEM

Time : Three Hours Maximum : 80 Marks

Part A

Answer **all** *questions.*
Each question carries 1 *mark.*

1. In ——— approach of distributed processing, clients and servers are not distinguished from one another.
2. The time interval of storing the status of current job and loading the status of new job to be executed is popularly known as ———.
3. The number of programs awaiting execution in the ready queue is defined as the ——— of multiprogramming.
4. The presence of a ——— in resource allocation graph is an indication of a deadlock state.
5. The principle of ——— makes the system fault tolerant.
6. Compaction is a method suggested to solve ——— type of fragmentation.
7. The ——— pathname begins at the root and follows a path down to the specified file.
8. In ——— allocation, a file can be considered as a pointer chain of disk blocks scattered on the disk.
9. ——— uses the concept of transferring processes from main memory to a backing store and later back to main memory.
10. A ——— is a special type of file that contains information on a set of files.

(10 × 1 = 10 marks)

Part B

Answer **all** *questions.*
Each question carries 2 *marks.*

11. Explain the working of POST.
12. Explain concurrent processing.
13. Explain the need and working of semaphores.
14. Write short note on file accessing methods.
15. Write short note on the need for device management.

(5 × 2 = 10 marks)

Turn over

Part C

Answer any **five** *questions.*
Each question carries 4 *marks.*

16. Compare and contradict multiprogramming with time sharing systems.
17. What are the important functions of Operating Systems ?
18. What are the important services of Operating Systems ?
19. Write short note on process creation and execution.
20. Explain the concept of multiple processor scheduling.
21. Compare the working of contiguous and linked allocation.
22. Write short note on dead locks and its avoidance.
23. Write short note on disk scheduling policies.

(5 × 4 = 20 marks)

Part D

Answer any **five** *questions.*
Each question carries 8 *marks.*

24. Explain process states and importance of PCB in program execution.
25. Compare and contradict multiprogramming and multiprocessing.
26. Explain process coordination, critical sections and semaphores.
27. Explain two level and tree structured directory structures ? What are different types of path names ?
28. Compare preemptive and non-preemptive scheduling with example.
29. Explain the working of demand paging.
30. Distinguish any two page replacement algorithms.
31. Write short note on :
    (a) Swapping.
    (b) Virtual memory.
    (c) File protection techniques.
    (d) Device management techniques of OS.

(5 × 8 = 40 marks)