17U670S (Pages: 2) Name: …………..……….

Reg. No…………..………

SIXTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2020
(CUCBCSS - UG)
(Supplementary/Improvement)
CC15U BCA6 B15 - OPERATING SYSTEMS
Computer Application – Core Course
(2015, 2016 Admissions)

Time: Three Hours   Maximum: 80 Marks

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

1. Each process in the OS is represented by a _____

2. Give an example of time sharing operating system.

3. The principle of aging is recommended as a solution for _____

4. The number of processes completed per second _____

5. An address generated by CPU is known as _____

6. The objective of multiprogramming is _____

7. To avoid the race condition, the number of processes that may be simultaneously inside the critical section is _____

8. Dirty bit is used to show _____

9. A system program that sets up an executable program in main memory ready for execution is _____

10. The principle of locality of reference justifies the use of _____

(10 x 1 = 10 Marks)

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

11. Operating system acts as a resource manager. Justify.

12. What is convey effect?

13. Define virtual memory.

14. Mention any four attributes of file.

15. What is disk scheduling?

(5 x 2 = 10 Marks)

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

16. How free space is managed?

17. Explain process states and importance of PCB in program execution.

18. Compare first fit, best fit and worst fit allocation of memory.

19. Write the code to implement mutual exclusion condition in critical section problem using Test and Set instruction.

20. Explain directory structures in detail.

21. Explain the different file accessing methods.

22. Discuss about booting process.

23. Explain any two page replacement policies.

(5 x 4 = 20 Marks)

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

24. With the help of a neat diagram explain the concept of demand paging.

25. Compare and contrast segmentation and paging.

26. Explain about various CPU scheduling algorithms with example.

27. Explain in detail various disk scheduling algorithms.

28. Compare and contrast Multiprogramming, Multitasking and Multiprocessing.

29. Explain File allocation methods in detail.

30. Explain Banker's algorithm with an example.

31. Write notes on

    a) Thrashing

    b) Linked allocation and indexed allocation.

(5 x 8 = 40 Marks)

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