16U668 (Pages: 2) Name: ……..…….

Reg. No……..……

SIXTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2019

(Regular/Improvement/Supplementary)

(CUCBCSS-UG)

CC15U BCA6 B15 - OPERATING SYSTEMS

Computer Application–Core Course

(2015 Admission onwards)

Time: Three Hours Maximum: 80 Marks

Part A

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

1. …… is a model in which components located on networked computers communicate and coordinate their actions by passing messages.
2. Expand POST
3. …… scheduler selects from among the processes that are ready to execute.
4. Bankers algorithm is a deadlock …… algorithm.
5. …… fragmentation is a problem in Variable size allocation.
6. Frame table stores allocation details of physical memory. True/False
7. In scheduling, the problem of indefinite blocking is known as ……
8. Virtual memory is commonly implemented by ……
9. …… is a named collection of related information.
10. …… is a process in which data is temporarily held to be used and executed by a device, program or the system.

(10 x 1 = 10 Marks)

Part B

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

11. Define Operating System.
12. What are concurrent processes?
13. How operating system maintains relocation principle?
14. What are the techniques of directory implementation?
15. What are the functions of device management?

(5 x 2 = 10 Marks)

Part C

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

16. Compare multiprogramming and multiprocessor systems.

17. Give notes on Booting process.
18. State and solve the Readers Writers Synchronization problem.
19. Explain the need of critical section implementation in concurrent processing.
20. Explain the solution used in Bakery algorithm used for mutual exclusion problem.
21. What is meant by Inverted Page Table?
22. What are the file system design techniques used for file management?
23. What are the disk scheduling policies followed by operating systems?

(5 x 4 = 20 Marks)

Part D

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

24. Explain the services and functions of Operating Systems.
25. What are PCBs? Explain its role in process management.
26. What are the methods used for Deadlock Prevention and Avoidance.
27. Describe the various Scheduling Algorithms used for CPU scheduling.
28. Explain in detail any four page replacement policies.
29. Give the techniques of Virtual memory implementation.
30. What are the various free space management techniques in operating system?
31. Write notes on:
    a) Spooling.
    b) Device management techniques.
    c) Thrashing.
    d) Fragmentation.

(5 x 8 = 40 Marks)

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