

SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MARCH 2021

B.C.A.

BCA 6B 12—OPERATING SYSTEMS

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

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

1. The number of service requests serviced per unit time is :
2. What is means by Resuming a Process ?
3. What happens when you execute the following command ?
4. Write a command to display the list of files and directories that begin with a character 'a' or 'b' or 'c'.
5. SRT stand for :
6. Who decides which process gets the device when and for how much time ?
7. The main function of the command interpreter is :
8. A memory management technique for letting processes execute outside of memory is :
9. Each endpoint of a communication is :
10. Name the file loaded to mobile device to work with applications.

(10 × 1 = 10 marks)

Section B*Answer at least five questions.**Each question carries 3 marks.**All questions can be attended.**Overall Ceiling 15.*

11. What is time- sharing system ?
12. Name two different types of Real time Operating Systems.

Turn over

13. When running Linux commands, the kernel automatically opens three files ? What are they ?
14. Which command is used change protection mode of all the files in current working directory starting with BCA and ending with 1, 2 or 4 to add read and write privileges only.
15. What is thrashing ? When does it occur ?
16. State the main difference between logical from physical address space.
17. What is a threat ?
18. Define security policy.

(5 × 3 = 15 marks)

Section C

Answer at least five questions.

Each question carries 5 marks.

All questions can be attended.

Overall Ceiling 25.

19. What are the benefits of Multiprogramming ? Briefly explain each.
20. Name and briefly explain 4 sections associated with a process.
21. Explain the use of grep and pipe with suitable example.
22. What are the characteristics of a good process scheduler ? Explain.
23. With a suitable example explain Round Robin Scheduling.
24. Explain the advantage of Dynamic Loading.
25. Define Swapping. What is the main advantage of swapping ?
26. What is meant by hardware protection ? What are two different modes of operation in Hardware Protection ?
27. What is a Kernel in Linux system ? Explain the responsibilities of Kernel.

(5 × 5 = 25 marks)

Section D

Answer any three questions.

Each question carries 10 marks.

28. What is a PCB ? List and briefly explain the information contained in PCB associated with a process.
29. List and explain different methods for allocation in a File System ?

30. Consider the following set of processes with the arrival times and the CPU burst times given in milliseconds. What is the average turnaround time with First Come First Serve Scheduling algorithm. Also draw the chart of scheduling :

Process	Arrival Time	Execution Time
P ₀	0	5
P ₁	1	3
P ₂	2	8
P ₃	3	6

31. What are main difference between Paging and Segmentation ? Explain in detail.
32. With a block diagram explain the architecture of mobile OS.

(3 × 10 = 30 marks)