

2021/TDC/CBCS/ODD/  
CSCSEC-301T/089

TDC (CBCS) Odd Semester Exam., 2021  
held in March, 2022

COMPUTER SCIENCE  
( 3rd Semester )

Course No. : CSCSEC-301T

( Unix/Linux Programming )

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

SECTION—A

Answer any *fifteen* from the following as directed :

1×15=15

1. Write down the functions of Linux OS.
2. What is booting?
3. Mention two most popular Linux distributions.

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( Turn Over )

4. What is shell?
5. Draw the process state diagram.
6. \_\_\_\_\_ command is used to remove directory.  
( Fill in the blank )
7. What is the purpose of daemon process?
8. What is the use of 'pwd' command?
9. What do you mean by root user in Linux?
10. What does '/bin' directory contain?
11. What are attributes of a file?
12. What does 'X' in directory permissions of a Linux indicate?
13. What is shell script?
14. How do you declare a shell variable?
15. Name two Vi editors present in Linux.

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( Continue )

( 3 )

16. Extension of a shell script file is \_\_\_\_\_.  
( Fill in the blank )
17. Write the uses of system calls.
18. \_\_\_\_\_ command gives the number of lines, words and characters in the data.  
( Fill in the blank )
19. What is the use of 'grep' command?
20. \_\_\_\_\_ command displays the text of the file line by line.  
( Fill in the blank )

SECTION—B

Answer any *five* from the following :  $2 \times 5 = 10$

21. State the differences between open-source software and free software.
22. Write two basic features of Linux.
23. What are the differences between internal command and external command?

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( Turn Over )

( 4 )

24. Write the functions of `fork()` and `exec()`.
25. What are the file permissions in Linux?
26. What is quota management in Linux?
27. What are Bourne shell and C shell?
28. Write a shell script to calculate the sum of two numbers.
29. What are pipes and filters?
30. Write the general syntax of if-else statement in Linux.

SECTION—C

Answer any *five* from the following :  $5 \times 5 = 25$

31. Discuss the architecture of a Linux system.
32. Define the following terms :  $2 \frac{1}{2} \times 2 = 5$   
(a) Kernel Mode OS  
(b) User Mode OS

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( Continued 2 )

33. What is 'process' in Unix? Discuss the mechanism of process creation in Unix. 1+4=5
34. Write the uses of the following commands : 1×5=5
- (a) sudo
  - (b) ls
  - (c) chmod
  - (d) ping
  - (e) cp
35. What are the three types of users in Linux? Discuss their functions. 1+4=5
36. Explain the directory structure of Unix in detail.
37. Discuss the three modes of operations in Vi editor in Linux.
38. Write a shell script to calculate the factorial of an integer number.
39. Write a shell script to find the reverse of an integer number.
40. Discuss the different types of loops used in shell script.

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