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.

(Turn Over)

(2)

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.

(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 :   2×5=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?

(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 : 5×5=25

31. Discuss the architecture of a Linux system.

32. Define the following terms : 2½×2=5
    (a) Kernel Mode OS
    (b) User Mode OS

(5)

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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