Question Bank

Introduction to Linux Operating System – 1 (501)

Q-1 Answer following MCQ.

1. What is the primary function of the Linux kernel?
   A) Provide a graphical interface
   B) Manage hardware resources and system operations
   C) Manage user authentication and access
   D) Provide networking functionality

2. Which of the following is NOT part of the Linux kernel?
   A) Process management
   B) Memory management
   C) File system management
   D) User applications

3. What is the role of the shell in Linux?
   A) Interface between the user and the kernel
   B) Manages hardware components
   C) Handles network connections
   D) Manages file systems

4. Who is the creator of the Linux kernel?
   A) Bill Gates
   B) Richard Stallman
   C) Linus Torvalds
   D) Steve Jobs

5. When was the first version of Linux released?
   A) 1980
   B) 1991
   C) 1993
   D) 2000

6. Which operating system is Linux based on?
   A) UNIX
   B) MS-DOS
   C) Windows NT
   D) MacOS

7. What is the primary reason for Linux's success in servers, compared to other operating systems?
   A) It's free and open-source.

B) It has better gaming support.

C) It's user-friendly for beginners.

D) It has better hardware compatibility.

8. Which of the following is NOT a feature of Linux?

A) Multitasking

B) Multi-user

C) Security

D) Single-core processing

9. Which of the following is a Linux distribution?

A) Ubuntu

B) Windows 10

C) macOS

D) Solaris

10 . Which of the following commands is used to display the current working directory in Linux?

A) pwd

B) ls

C) cd

D) dir

11. What does the command chmod 755 filename do in Linux?

A) Change file owner to 755

B) Set file permissions for the owner, group, and others

C) Create a file named "755"

D) Set read, write, and execute permissions for all users

12. Which of the following commands is used to list all files, including hidden files, in a directory?

A) ls -a

B) ls -l

C) ls -r

D) ls -h

13. Which command is used to check the disk usage of a directory in Linux?

A) du

B) df

C) ls

D) fdisk

14. What does the command tar -xzvf file.tar.gz do?

A) Compress a file into a .tar.gz archive

B) Extract the contents of a .tar.gz archive

C) Convert a tar file to a .gz format

D) Create a tar file

15. Which command will display the manual page for a command in Linux?
    A) man
    B) help
    C) info
    D) doc

16. Which command is used to display the last few lines of a file in Linux?
    A) head
    B) tail
    C) cat
    D) more

17. What does the chmod command do in the Linux shell?
    - A) Change file ownership
    - B) Change file permissions
    - C) Change file type
    - D) Change file location

18. Which of the following is NOT a valid redirection operator in the Linux shell?
    A) >>
    B) <
    C) <<
    D) ~>

19. In Linux, which of the following commands is used to view the contents of a file?
    A) cp
    B) ls
    C) cat
    D) mv

20. What is the purpose of the until loop in Unix shell scripting?
    A) To loop through a set of values and execute commands
    B) To loop through a set of commands while a condition is false
    C) To exit a script
    D) To read input from a file

21. What is the difference between while and until loops?
    A) while loops while true, until loops until true
    B) while loops until true, until loops while true
    C) while loops are faster, until loops are slower
    D) while loops are slower, until loops are faster

22. How do you exit a while loop?

A) Using break

B) Using exit

C) Using return

D) Using done

23.Can you nest loops in Unix shell scripting?

A) Yes

B) No

C) Only for loops

D) Only while loops

24. What is the purpose of the ;; in a case statement?

A) To separate commands

B) To separate patterns

C) To indicate the end of a case

D) To indicate the start of a case

25. What is the purpose of the && operator?

A) To execute a command regardless of the previous command's exit status

B) To execute a command only if the previous command succeeds

C) To execute a command only if the previous command fails

D) To pipe output from one command to another

26.What is the purpose of the || operator?

A) To execute a command only if the previous command succeeds

B) To execute a command only if the previous command fails

C) To execute a command regardless of the previous command's exit status

D) To redirect output to a file

27.What does the ? wildcard character match?

A) Any string of characters

B) Any single character

C) Any number of characters

D) Only alphanumeric characters

28.What is the purpose of the > redirection operator?

A) To append output to a file

B) To overwrite the contents of a file with output

C) To pipe output from one command to another

D) To read input from a file

29.What is the purpose of the >> redirection operator?

A) To overwrite the contents of a file with output

B) To append output to a file

C) To pipe output from one command to another

D) To read input from a file

30. Which command will match the word hello in all cases (case-insensitive)?

A) grep hello data.txt

B) grep -i hello data.txt

C) grep -c hello data.txt

D) grep -n hello data.txt

31. Which grep option is used to count the number of matching lines?

A) -i

B) -n

C) -c

D) –v

32. grep -c error logfile.txt   display?

A) All lines containing the word error.

B) The number of lines containing the word error.

C) Line numbers of error.

D) All lines except those containing error.

33.Which command will show both line numbers and case-insensitive matches of unix in notes.txt?

A) grep unix notes.txt

B) grep -c unix notes.txt

C) grep -i -n unix notes.txt

D) grep -n -c unix notes.txt

34. grep -n "mat" t1.txt   will do?

A) Count lines containing mat.

B) Display matching lines with their line numbers.

C) Display all lines except those with mat.

D) Display only case-insensitive matches of mat.

35. What will grep -i -n unix file.txt do?

A) Show only count of matches.

B) Show matching lines with line numbers, ignoring case.

C) Show only line numbers.

D) Show lines not containing unix.

36. grep "^The" file.txt   will do?

A) Display the lines that begins with "The"

B) Display the lines that ends with "The"

C) Display the no lines that begins with "The"

D) Display count that begins with "The"

37. grep "test$" file.txt will do?

A) Display the lines that begins with "test"

B) Display the lines that ends with "test"

C) Display the no lines that begins with "test"

D) Display count that begins with "test"

38. sed 's/bba/mba/g' t1.txt will do?

A) replace bba with mca globally

B) replace bba with mba globally

C) replace bba with mba with first occurences

D) Does not replace bba with mca globally

39. What does sed stand for?

A) Stream Editor

B) String Editor

C) Syntax Editor

D) Script Editor

40. What is the syntax for replacing a string using sed?

A) sed 's/old/new/' file

B) sed 'r/old/new/' file

C) sed 'c/old/new/' file

D) sed 'd/old/new/' file

41. How do you replace all occurrences of a string using sed?

A) sed 's/old/new/' file

B) sed 's/old/new/g' file

C) sed 's/old/new/p' file

D) sed 's/old/new/d' file

42. What does the g flag do in sed?

A) Global replacement

B) Grep for pattern

C) Generate new file

D) Get input from file

43. How do you delete a line containing a specific pattern using sed?

A) sed '/pattern/d' file

B) sed '/pattern/p' file

C) sed '/pattern/s' file

D) sed '/pattern/r' file

44. What does the -i option do in sed?

A) In-place editing

B) Ignore case

C) Input file

D) Invert match

45. How do you print a specific line range using sed?

A) sed -n '1,5p' file

B) sed '1,5d' file

C) sed '1,5s' file

D) sed '1,5r' file

46. What does the -n option do in sed?

A) Suppress automatic printing

B) Enable newline characters

C) Specify input file

D) Perform numeric operations

47. How do you append text to a file using sed?

A) sed '$a text' file

B) sed '$i text' file

C) sed '$c text' file

D) sed '$d text' file

48. Which command is used to extract a specific column from a file?

A) cut

B) sort

C) uniq

D) wc

49. What is the purpose of the tr command?

A) To translate characters

B) To sort a file

C) To remove duplicate lines

D) To count the number of lines

50. What is the purpose of the uniq command?

A) To sort a file

B) To remove duplicate lines

C) To count the number of lines

D) To cut a file

Answer following descriptive questions (4 marks each)

- ➤ Explain the component of LINUX OS.
- ➤ What are the key features of Linux?
- ➤ Explain the types of shell and its characteristic
- ➤ Explain the types of files in Linux.
- ➤ What are the different types of file permissions in Linux?
- ➤ What is the difference between the cp and mv commands ? Provide examples for each.
- ➤ Explain the text processing command.
- ➤ Explain ps,bg and fg commands.
- ➤ Explain any 5 date commands.
- ➤ How vi editor works explain in detail
- ➤ Explain wildcards character(*,?,[ ]) with example
- ➤ Explain the redirection operator(>,>>,<) with example
- ➤ Differentiate between while and until loop
- ➤ Working of case statement
- ➤ How for loop works in unix.
- ➤ Explain with example (expr , $())
- ➤ Explain grep utility of linux operating system
- ➤ Explain sed utility of linux operating system
- ➤ Differentiate between grep and sed utility in brief.
- ➤ Explain the following option in grep utility :
       –i , -c , -n , ^ , $
- ➤ Explain substitute and delete option of sed utility with example.