1. Login as root, to change the login shell to **/bin/csh** for **user100**, you type _____.

   A. useradd -s /bin/csh user100
   B. echo $SHELL
   C. SHELL=/bin/csh user100
   D. usermod -s /bin/csh user100
   E. All of the above

2. Login as root, to create a user account based on the following:

   Username: **user200**
   Home Directory: **/home/user200home** *(Create the user's home directory if it does not exist)*
   Initial Group: **root**
   Which of the following is the command that should be used?

   A. useradd user200
   B. useradd -d /home/user200home user200
   C. useradd -g root user200 -md /home/user200home
   D. useradd -d /home/user200home -m
   E. None of the above

3. Logged in as root, If **user300** is a valid account and the home directory is **/home/user300**, the command "**usermod -d /home/user300home user300**" will _____.

   A. Only change the home directory of **user300** in file **/etc/passwd**
   B. Create a new directory named **user300home** in **/home**
   C. Create a new directory named **user300home** in **/home**, and make the necessary change to **/etc/passwd**
   D. Create a new directory named **user300home** in **/home**, and make the necessary change to **/etc/passwd,** and delete the previous directory **/home/user300**
   E. None of the above

4. Which of the following command deletes **user400** from **/etc/passwd** and remove **user400**'s home directory and any files stored in it?

   A. userdel user400
   B. userdel -r user400
   C. usermod -r user400
   D. usermod -d user400
   E. None of the above

5. What is the file that stores encrypted user passwords?

A. /etc/passwd
B. /etc/group
C. /etc/shadow
D. /etc/inittab
E. None of the above

6. Identify the command that is used to delete an existing group in Linux?

A. groupdel
B. gpasswd
C. groupmod
D. userdel
E. None of the above

7. Which of the following options for **useradd** command can be used to prevent Linux from creating a group with the same name as username?

   A. -N
   B. -s
   C. -d
   D. -m
   E. None of the above

8. Which of the following command can be used to verify if **user500** has been created in the system?

   A. ls /home
   B. ls /root
   C. grep user500 /etc/passwd
   D. cat /etc/group|grep user500
   E. None of the above.

Login as root, run the following commands and answer question **9** to **13**:

```
groupadd  group1
groupadd  group2
useradd  -m user1
useradd  -G group1 -m user2
useradd  -G group1,group2 -m user3
useradd  -g  group2 -G user2 -m user4
gpasswd  -a  user4  group1
gpasswd  -d  user3  group2
groups  user3
```

9. Who is a member of **group1**?

   A. user1, user2 and user3
   B. user2, user3 and user4
   C. user2 and user4
   D. user3 and user4
   E. None of the above

10. Who is a member of **group2**?

    A. user2
    B. user3
    C. user4
    D. user3 and user4
    E. None of the above

11. Who is a member of group **user2**?

    A. user2
    B. user1 and user2
    C. user2 and user4
    D. user3 and user4
    E. None of the above

12. What is the output produced by command: ***groups user3?***

    A. user3: user3 group1
    B. user3: group1 group2
    C. user3: user3
    D. user3: user3 group1 grop2
    E. None of the above

13. To make **user4** the administrator of **group1**, you login as root and type_____.

    A. usermod user4 group1
    B. gpasswd -A user4 group1
    C. useradd -g group1 user4
    D. groupadd group1 user4
    E. None of the above

14. Which of the following uses the bash shell for the command interpreter in a script?

    A. /bin/bash
    B. #/bin/bash
    C. !/bin/bash
    D. #!/bin/bash
    E. None of the above

15. What special variable is used to determine the exit status of a previously executed command?

    A. $#
    B. $0
    C. $?
    D. $9
    E. None of the above

16. You use the _____ symbol to mark the beginning of a comment in a script.

    A. #
    B. $
    C. !
    D. >
    E. None of the above

17. To redirect standard output and error of **script1** to a file named **outerr.txt**, use the _____ command.

    A. script1 1> outerr.txt
    B. script1 2> outerr.txt
    C. script1 &> outerr.txt
    D. script1 > /dev/null
    E. None of the above

18. _____ is the operator that is used when you want one command to execute only if another command executes successfully.

    A. *
    B. ||
    C. &&
    D. >
    E. None of the above

19. _____ is the symbol used to separate commands in a list, which are executed sequentially.

    A. ;
    B. <
    C. >>
    D. &&
    E. None of the above

20. What is the output of the following statement?
    ```
    echo "\$(pwd)"
    ```

    A. current directory
    B. pwd
    C. $(pwd)
    D. syntax error
    E. None of the above

21. What is the output of the following statement?

```
echo 'Linux is an "open-source" operating system.'
```

    A. Linux is an "open-source" operating system.
    B. Linux is an open-source operating system.
    C. Linux is an 'open-source operating' system.
    D. 'Linux is an "open-source" operating system.'
    E. None of the above

22. What is the output of the following statements?
```
a=20; b=50
{a=40; b=100;}
(a=5; b=10)
echo $a $b
```

    A. 20 50
    B. 60 150
    C. 5 10
    D. 40 100
    E. None of the above

23. The following **echo** statement will execute _____ time(s).

```
for ((num=1; num<10; num++ ))
do
      echo $num
done
```

    A. 0
    B. 1
    C. 9
    D. 10
    E. None of the above

24. What is the result of executing the following statements?
```
for animal in cat dog bear ; do
      echo $animal
done
```

    A. The words "cat", "dog", and "bear" are displayed on the screen on separate lines
    B. The word "animal" is displayed on the screen
    C. The words "cat", "dog", "animal", and "bear" are displayed on the screen in one line
    D. Nothing is displayed
    E. None of the above

25. The following **echo** statement will execute _____ time(s).
```
((t=0))
while [ $t -eq 10 ] && [ $t -ge 0 ]
do
      echo "Blue ocean!"
done
```

   A. 0
   B. 1
   C. 2
   D. an infinite number of times
   E. None of the above

26. What is the result of executing the following statements?
```
((g=5))
until [ $g -lt 1 ]
do
      echo $g
      ((g--))
done
```

   A. The numbers 5,4,3,2, are displayed on the screen on separate lines
   B. The numbers 5,4,3,2,1 are displayed on the screen on separate lines
   C. The numbers 4,3,2,1,0 are displayed on the screen on separate lines
   D. Nothing occurs because there is a syntax error
   E. None of the above

27. What value of the variable name **total** will be displayed after executing the following statements?
```
((total=0))
for ((num1=1; num1<=3; num1++))
do
      for ((num2=1; num2<=2; num2++))
      do
            ((total++))
      done
done
echo $total
```

   A. 2
   B. 3
   C. 6
   D. 12
   E. None of the above

28. What value of the variable name **c** will be displayed after executing the following statements?

```
((x=1))
((c=0))
while [ $x -le 5 ] do
        ((y=4))
        until [ $y -le 1 ] do
                ((y--))
                echo $x $y
                ((c++))
        done
        ((x++))
done
echo "The number of times looped is: " $c
```

A. 5
B. 10
C. 15
D. 20
E. None of the above

29. Given x = 5. Which of the following will exit with a status of 0?

A. [$x > 1]
B. [$x -le 6]
C. [$x -lt 5]
D. [$x ! -eq 5]
E. None of the above

30. Which command sequence below will find the file named **HelloWorld**.sh in the directory **tools/toolbox**?

A. find /tools -name "HelloWorld.sh"
B. find –name "HelloWorld.sh" /tools/toolbox
C. find / -name "HeloWorld.sh"
D. find "HelloWorld.sh" /tools
E. None of the above

31. Which of the following commands will read the content of a text file and display on standard output?

A. less
B. head
C. cat
D. All of the above
E. None of the above

32. Identify the **root** user's home directory in Linux.

    A. /
    B. /root/home
    C. /home/root
    D. /root
    E. None of the above

33. Which one of the following would **NOT** place you in your home directory, where username is the name of the currently logged in user?

    A. cd
    B. cd ~
    C. cd ~/username
    D. cd /home/username
    E. None of the above

34. The command that will list all files in long format in current working directory, including hidden files _____.

    A. ls -ld
    B. ls -al
    C. ls -l
    D. ls -i
    E. None of the above

35. Which of the following is NOT true about hard link in Linux?

    A. You may create multiple hard links to the same file
    B. All hard links have the same inode number as the original file's
    C. All hard links become meaningless (orphan link) if the original file is removed
    D. The physical data of the file will not be deleted from the disk until all hard links are deleted.
    E. None of the above

    Given file listing as the following, answer question 36 to 37

    ```
    -rwxr-x-w- 2 david students 127 Oct 21 12:41 filetwo
    ```

36. What are the owner and group of **filetwo**?

    A. owner: david & group: students
    B. owner: students & group: david
    C. owner: root & group: root
    D. owner: david & group: david
    E. None of the above

37. Log in as root, which of the following is the right command to change **filetwo**'s owner to **jack** and group to **faculty**?

    A. chown filetwo faculty.jack
    B. chgrp jack faculty paul
    C. chown jack faculty filetwo
    D. chown jack.faculty filetwo
    E. None of the above

38. With an umask of 033, which will be the default file permission?

    A. `rw---x--x`
    B. `rw--w--w-`
    C. `rw-r--r--`
    D. `rw-rw-r--`
    E. None of the above

39. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?

    A. ./etc/passwd
    B. ../etc/passwd/.
    C. /passwd
    D. passwd
    E. ../passwd

40. Which of the following will prompt "What is your username?" then read the user's input and set the user's input to **userInput**?

    A. read userInput; echo "What is your username?"
    B. read -p userInput "What is your username?"
    C. read -p "What is your username?" userInput
    D. read userInput "What is your username?"
    E. None of the above