Sessional Test I– February, 2023

Roll No: ………………   [Total No. of Pages:]

Programme: B.E. (CSE)   **Time: 90 minutes**
Course Title: Linux
Course Code: CS153   **Max. Marks: 40**

General Instructions:
●   Follow the instructions given in each section.

Section - A
(Q 1 to 10: Each question carries 1 mark)

Q1: What does the "date" command do in Linux?

a) Displays the current time and date

b) Displays the system uptime

c) Displays the current user's login history

d) Displays the system hostname

Ans = a.

Q2:What does the "fg" command do in Linux?

a) Displays the status of background jobs

b) Sends a job to the background

c) Brings a job to the foreground

d) Terminates a job

Ans :- c

Q3 How to send a specific number of packets using ping command in linux

a) ping -c google.com   **b) ping -c 5 google.com**
c) ping google.com 5   d) ping -p 5 google.com
Ans :- b

Q4: how to hide the details while taking user input

a) read   b) read -p

c) read -d   d)read -s

Ans :- d

Q5: Which option of the "traceroute" command is used to specify the maximum number of hops?

a) -m

b) -n

c) -q

d) -T

Ans :- a

Q6: Which option of the "nice" command is used to run a command with a specific priority value?

a) -n

b) -p

c) -c

d) -f

ans = a

Q7: by default what does cal command print

a) **current month calender**   b) current year calender

c) date of current month   d) none of above

Ans :- a

Q8: meaning of gt relational operator

a) not a valid operator   b) greater

c) **greater than**   d) great

Ans :- c

Q9: What is the purpose of the "elif" keyword in a Linux shell script?

a) To specify a nested if-else statement

b) To specify an alternative condition to the original if statement

c) To terminate the if-else statement

d) To specify a for loop

Ans = b

Q10 What is the "dig" command used for in Linux?

a) To display the contents of a directory

b) To search for files on the system

c) To query DNS servers for information about domain names and IP addresses

d) To check the status of network interfaces

and = c

Q1. Who can set the niceness value of a process between -20 to -1?

a) Only Home user

b) Only root user

c) any user

d) niceness value can't be changes

Q2. what does simple uname command tell you

a) username

b) system information

c) hostname

d) all usernames in system

Q3. What default signal kill command carries

a) SIGTERM

b) SIGHUP

c) SIGKILL

d) SIGINT

Q4. what is Packet Internet Groper ?

a) pig

b) ping

c) PIG

d) None of the above

Q5. Manish wants to stop a running process , what key combination should he use

a) ctrl + c

b) ctrl + d

c) ctrl + z

d) &

Q6. Home user can set niceness value of a process between

a) 0 to 19

b) 0 to 20

c) -20 to 0

d) None of the above

Q7. what is the range of Niceness values?

a) -20 to 19

b) 0 to 10

c) -19 to 19

d) 0 to 20

Q8. What is the initial ttl value of first packet traceroute command sends?

a) 0

b) 10

c) 1

d) 3

Q9. X command is used to place background jobs in foreground, find X command?

a) bg

b) fg

c) process

d) None of the above

Q10. Nslookup tells us

a) domain name if ip is given

b) ip if domain name is given

c) hostname

d) both a and b

Q1. What command is used to print the output to screen in shell script?

a) Echo

b) Print

c) write

d) console

Q2. All processes have a parent process

a) False

b) True

c) Can't be said

d) None of the above

Q3. What is numeric value of SIGKILL signal

a) 9

b) 1

c)5

d) 3

Q4. what is the parent process of all the processes ?

a) bash

b) systemd

c) ps

d) None of the above

Q5. Monica wants to kill a running process , what key combination should he use

a) ctrl + c

b) ctrl + d

c) ctrl + z

d) &

Q6. What is used to specify the end of if block in script?

a) fi

b) }

c) else

d) None of the above

Q7. Command to specify the starting ttl value to 3 in traceroute

a) traceroute 3

b) traceroute –t 3

c) traceroute –q 3

d) trqceroute –n 3

Q8. What is the default value of packet size traceroute command sends?

a) 30 bytes

b) 100 bytes

c) 60 bytes

d) 10 bytes

Q1. Command to view all Network Interface Settings.

a) $bash

b) $ping

c) $interface

d) $ifconfig

Q2. Command to shows calendar of previous, current and next month?

a) $cal -3

b) $cal -1 +1

c) $cal

d) $cal -2

Q3. What command will you use to find out how long the system is active.

a) time

b) systime

c) uptime

d) date | time

Q4. which command helps Ram to run a program with modified scheduling priority?

a) ps

b) bg

c) nice

d) renice

Q5. Suggest a right command which is used to view all the available signals.

a) kill -l

b) kill

c) kill -i

d)kill -9

Q6. How can you view default value of nice?

a) $nice -n

b) $nice -i

c) $nice -v

d) $nice

Q7. which symbol is used to start process in background?

a) &

b) $

c) &&

d) ^

Q8. which command is used to display the system date and time?

a) date

b) time

c) systime

d) date | time

Q9. X command is used to place background jobs in foreground, find X command?

a) bg

b) fg

c) process

d) None of the above

Q10. Which command is useful for command line calculator?

a) cal

b) bc

c) calculator

d) None of the above

Q9. X command is used to place foreground jobs in background, find X command?

a) bg

b) fg

c) process

d) None of the above

Q10. Which operator is used to perform exponentiation in bc

a) **

b) ^

c) exp

d) pow

Q1: What is the difference between the traceroute and the ping commands?

a. The traceroute command displays the route taken by packets between two hosts, while the ping command tests the reachability of a host by sending ICMP echo request packets.

b. The traceroute and ping commands are used to display the same information and can be used interchangeably.

c. The traceroute and ping commands are used to manage different aspects of the system configuration.

d. The ping command is not used in modern Linux systems.

Ans = a

Q2: What is the syntax for using the traceroute command?

a. traceroute destination_address

b. traceroute -t destination_address

c. traceroute -h destination_address

d. traceroute -r destination_address

Ans :- a

Q3 What is the syntax for using the which command to find the location of a command?

a. which command_name

b. which -l command_name

c. which -p command_name

d. which -f command_name

ans = a

Q4: how to check list of available shells in system

a.   Shells
b.   cat /etc/shells
c.   cat shells
d.   cat SHELLS

Ans = b

Q5: which command will print ip address of hostname

a) hostname -i

b) hostname

c) uname

d) ipname

Ans :- a

Q6: how to print kernal name

a) uname -c

b) uname -k

c) uname -s

d) uname -d

ans = c

Q7: what will be output of cal -3

a) past current and next month calendar   b) year 3 calendar

c) date of current month   d) calendar of 3rd month

Ans :- a

Q8: output of the following command date +%D

a) 03-02-23   b) 03:02:23

c) 03/02/23   d) 03.02.23

Ans :- c

Q7 Akshay used hostname command on terminal/shell. What output ill he get?

a) hostname of the system   b) available ram statistics

c) network connectivity status of system   d) none of the above

Q8 Navish used cal command on terminal/shell. Which command should he use?

a) a calculator will be opened on shell   b) date and time will be displayed

c) calendar of current month will be displayed   d) none of the above

Q9 Jack wants to look for the calendar of 2020. Which flag should he use with cal command?

a) -w   b) -m

c) -y   d) -n

Q10 Jai wants to test network connectivity by sending packets to a remote host. Which

   command should he use?

a) cal   **b) ping**

c) fg   d) ifconfig

Q9: What is the difference between the bg and the fg commands?

a. The bg command moves a job to the foreground, while the fg command moves a job to the background.

b. The bg command terminates a background job, while the fg command resumes a suspended job in the foreground.

c. The bg and fg commands are the same and can be used interchangeably.

d. The bg and fg commands are used to manage different types of processes.

Ans = b

Q10 What is the ps command used for in Linux?

a. To display the current directory

b. To display a list of running processes

c. To display a list of installed packages

d. To display system information

and = b

Q3 What does the uptime command display in linux ?

a) The system's uptime and load average   b) The current date and time

c) The amount of RAM usage   d) both a and b

Q4 Vijay wants to calculate some mathematical expressions. Which command should he use?

a) bc   b) echo

c) vi   d) cb

Q5 Which option can be used with the uptime command to display the output in a more human-read

-

able format?

a) -m   **b) -h**

c) -c   d) -p

Q6 What is the maximum value that the load average can reach?

a) 1   **b) There is no maximum value**

c) 100   d) 10

Q1. Command to shows calendar of selected month and year.

a) $10 2022

b) $cal 10

c) $cal 10 2020

d) $calender 10 2020

Q2. Ishan wants to perform some arithmetic calculations. Which command should he use?

a) maths

b) cal

c) cb

d) bc

Q1 Mehar wants to display current date and time. Which command can be used by him ?

a) date   b) bc

c) cal   d) ping

Q2 Which option is used with the date command to set the system date and time?

a) -w   b) -u

c) -r   **d) -s**

Q3. Which command will you use to check the system date and time?

a) time

b) systime

c) date

d) date | time

Q4. what is Packet Internet Groper ?

a) pig

b) ping

c) PIG

d) None of the above

Q5. Suggest a right command which is used to locate the executable file associated with the given command by searching it in the path environment variable.

a) find

b) search

c) which

d)bin

Q6. How can you view all the running processes by group id?

a) $ps –g groupid

b) $ps –group groupid

c) $ps id

d) Both A & B

Q7. what is the range of Niceness values?

a) -19 to 20

b) 0 to 10

c) -19 to 19

d) 0 to 20

Q8. which command helps to run a program with modified scheduling priority?

a) ps

b) bg

c) nice

d) renice

Q9. X command is used to place foreground jobs in background, find X command?

a) bg

b) fg

c) process

d) None of the above

Q10. Which command is useful when you want to know about the route and about all the hops that a packet takes?

a) ps

b) ping

c) traceroute

d) None of the above

Q1 What does the date command do in Linux?

a) Displays the current date and time   b) Sets the system's clock

c) Displays the calendar   d)head

Q2 Which option is used with the date command to set the system date and time?

a) -w   b) -u

c) -r   **d) -s**

Q3 What does the uptime command display in Linux ?

a) The system's uptime and load average b) The current date and time

c) The amount of RAM usage   d) The system's network status

Q4 Vijay wants to calculate some mathematical expressions. Which command should he use?

a) bc   b) echo

c) vi   d) cb

Q5 Which option is used with the `uptime` command to display the output in a more human-readable format?

a) -m   b) -u

c) -h   d) -p

Q6 What is the maximum value that the load average can reach?

a) 1   b) 5

c) There is no maximum value   d) 10

Q7 Akshay wants to check the hostname of the system. Which command should he use?

a) hostname   b) nice

c) ping   d) ifconfig

Q8 Navish wants to displays the calendar of the current month. Which command should he use?

a) fg   b) nice

c) cal   d) uptime

Q9 Which option is used with the `cal` command to display the calendar of a specific year?

a) -w   b) -m

c) -x   **d) -y**

Q10 Jai wants to test network connectivity by sending packets to a remote host. Which command should he use?

a) cal

b) ping

c) fg

d) ifconfig

Section - B
(Q 11 to 15 : Each question carries 2 marks)

Q1: What is the purpose of the "echo" command in shell scripting?

a) To display text on the screen

b) To create a new directory

c) To copy files from one location to another

d) To move files from one location to another

Ans:)a

Q2: Which of the following is not a shell in Linux?

a) Bash

b) KornShell

c) Zsh

d) Python

Ans:- d

Q3: What is the syntax for using the "bc" command to perform a simple arithmetic calculation?

a) bc expression

b) expression | bc

c) bc -e expression

d) expression bc

Ans: b

Q4: how to run any command in background

a) $command &   b) $&command

c) $fg command   d) $bg command

Ans = a

Q5: read -p option is used for

a)to print a message   b) to print prompt before taking input

c) cut and paste files   d) to paste file content side by side

Ans = b

Q11 command to show all available shells in your system

a) echo $SHELLS

b) cat /etc/shells

c) cat /etc/passwd

d) echo $0

Q12 How can you comment out a line in shell script?

a) // This is a comment

b) # This is a comment

c) <!-- This is a comment -->

d) /* This is a comment */

Q13. What is the purpose of uptime command

a) To display current time

b) To display system uptime(running time)

c) To display system hostname

d) To display system load averages

Q14 The first line in any shell script begins with a _____?

a)!

b) #

c)%

d)$

Q15 What will be the output of the given command $echo "var=3;var^=5;var" | bc ?

a) 15

b) 343

c) 243

d) Error

Q11 How can you use a variable named `variable`'s value in shell script?

a) $variable

b) variable

c) %variable

d) #variable

Q12 What will be printed on the screen when run the following script

#! /bin/bash

Name=Rohit

Echo '$Name'

a) Rohit

b) '$Name'

c) "Rohit"

d) Name

Q13. Which command is used to change the hostname of the system?

a) sudo hostname new_name

b) sudo hostnamectl hostname new_name

c) hostname new_name

d) both a and b

Q11 Suggest the right command to prints all the system information in the following order: Kernel name, network node hostname, kernel release date, kernel version, machine hardware name, hardware platform, operating system.

a) system

b) uname -a

c) uname

d) whoami

Q12 which command is used to activate the driver for the given interface?

a) $ifconfig interface up

b) $ifconfig interface down

c) $ifup interface

d)Both a and c

Q13. The shell script is___?

a) Group of functions

b) Group of commands

c) File containing special symbols

d) File containing a series of commands

Q14 The first line in any shell script begins with a _____?

a)!

b) #

c)%

d)$

Q15 What will be the output of the given command $echo "var=8;var^=3;var" | bc ?

a) 8

b) 24

c) 512

d) Error

Q14 The first line in a shell script is #! /bin/rm , what will happen if we run this script file?

a) error will occur

b) the file will be deleted

c) content of file will be displayed

d) none of the above

Q15 What is output of which which ?

a) /usr/bin

b) error

c) /usr/bin/which

d) /bin/which

Q1: what does -s options does with read option

a) hide the user input

b) show the user input

c) hide the output

d) show file output

Ans:)a

Q2: Which of the following is not a shell in Linux?

a) Bash

b) sh

c) Zsh

d) Python

Ans:- d

Q3: What is the syntax for using the "bc" command to perform a simple arithmetic calculation?

a) bc expression

b) expression | bc

c) bc -e expression

d) expression bc

Ans: b

Q4: what does le operator means

a) greater than   b) less than
c) lower than   **d) less than equal to**

Ans = d

Q5: how to print count of all the command line arguments

a)$$ **b) $#**
c) $1   d) $0
Ans = b

Q11.Ram wants to check how the data transmitted from a local machine to a remote machine. Suggest him a right command which can help him to do the same.

a) ping

b) traceroute

c) track

d) trackpath

Q12 which command is used to view all processes owned by you ?

a) $ps -i

b) $ps -x

c) $ps -g

d)None of the above

Q13. #! in shell script is called as ___?

a) shebang

b) bash

c) shell

d) None of the above

Q14 The first line in any shell script begins with a _____?

a)!

b) #

c)%

d)$

Q15 What will be the output of the given command $ echo "var=8;var*=9;var" | bc ?

a) 8

b) 24

c) 72

d) Error

Q11 How can you stop the ping command from running continuously?

a) Press Ctrl+C   b) Use the -q option

c) Both a and b   d) use the -t option

Q12 What is the purpose of the nice command in Linux?

a) To adjust the priority of a running process   b)To view the status of a process

c) Both a and b   d)Read and Execute

Q13 which option is used with the nice command to set the priority level?

a) -t   **b) -n**

c) -q   d) -r

Q14 Which of the following commands can be used to view the current priority of a process?

a) renice   b) nice

c) ps   d) top

Q15 Which command is used to run a shell script in Linux?

a) run   **b) bash**   c) source   d) execute

Q11 How can you stop the ping command from running continuously?

Use the -q option

a) Press Ctrl+C   b)

c) Both a and b   d) use the -t option

Q12 What is the purpose of the nice command in Linux?

a) To adjust the priority of a running process   b)To view the status of a process

c) Both a and b   d)Read and Execute

Q13 which option is used with the nice command to set the priority level?

a) -t   **b) -n**

c) -q   d) -r

Q14 Which of the following commands can be used to view the current priority of a process?

a) renice   b) nice

c) ps   d) top

Q15 Which command is used to run a shell script in Linux?

a) run   **b) bash**   c) source   d) execute

Section – C
(Q 16 to 19: Each question carries 5 marks)

Q)1 Write a Script to Read Employee Monthly Salary and
Print his Bonus. The Bonus should be 25% of Annual Salary

Q)2 Write a Script to Check whether Numbers OR Equal OR Not.
 If the Numbers are not Equal then Print Greater Number?

Q)3 Q. Write a shell script which will take input data of an employee and add that data at the end of a file
 empid, empname, empsalary, emprole

Q)4 Write a Script to Read 4 Digit Integer Number and Print
 the Sum of Digits Present in that Number?

Q16 Write a script that takes a number as input and tells whether the given number is a three digit number or not.

Q17. Write a script that take two numbers as input from the user, and prints the larger of two numbers on the screen.

Q16 Write a script that takes a number as input and checks whether it is divisible by 2,3 and 5

Together or not.

Q17. Write a script that takes 3 numbers and calculates the biggest among them all.

Q18 Write differences between ping command and traceroute command. What is the default ttl value in traceroute command and how can you change it? Also tell the default no. of packets it sends.

 Q19 Write a script that takes two numbers as input and calculates their sum and print the sum of digits of their calculated sum.

Q)1 take 3 input from user which represents marks of 3 subjects, marks are out of 100 if any of the subject marks is less

Than 33 the print fail otherwise print cgpa

Q)2 write a script to read 2 floating point numbers and add their sum

Q)3 write a script to to check if given number is positive and even or not

Q)4 write a script to read 2 numbers from command line arguments and if command line arguments are not equal to 2

Then print message that user need to provide exactly two arguments else print sum of both numbers

Q16 Store the output of the command "ls" in a variable. Display "Here is the list of data _." where "_" is the output of the "ls" command.

Q17. Write a shell script to check whether a person is eligible to cast vote or not. For this take input from the user and read age in a variable age and check the condition age>=18, if the condition is true, "person will be eligible for voting" else "not" print this message.

Q18 Write the use of the following commands:

a) ps

b) ping

Q19 Write the syntax of if-else statement in shell script with example.

Q20. Describe the use of the following command with import flags(min 2 flags) of each.
a)ifconfig
b)nice

Q16. Write a shell script to check whether a person is a senior citizen or young man or a child. For this take input from the user and read age in a variable age and check the condition age>=55, if the condition is true, "senior citizen",

age<55 and age>=18, if the condition is true, "young man" , else

"child" print this message.

Q17 Write a shell script to store the output of the command "ps" in a variable. Display "Here is the list of running process _." where "_" is the output of the "ps" command.

Q18. Describe the use of the following command with import flags(min 2 flags) of each.

a) ps

b) ping

Q19 Write the syntax of if-else statement in shell script with example.

Q20 Write the use of the following commands:

a) nice

b) traceroute

Q16 Write a shell script to accept n integers and display their sum.

Q17 Write a shell script to accept an integer and calculate the sum of its digits.

Q18 Write a shell script to copy a file to another file, if the copying fails try again to copy in 10

seconds.

Q19 Write a shell to save hostname and date in a file named details.txt.

Q16 Write a shell script to accept n integers and display their sum.
Q17 Write a shell script to accept a number from user and print which day of week it is. For ex
-
ample if user enters 1 you have to print monday, if user enters 2 you have to print Tuesday and
so on.
Q18 Write a shell script to accept a number from user and display odd if it is an odd number
otherwise print even.
Q19 Write a shell to save hostname and date in a file named details.txt. t.