Set 1 - Midterm Questions

MCQs:

1. Which command is used to list all files and directories in the current directory?

   a) ls

   b) list

   c) dir

   d) show

2. What does the 'chmod' command do?

   a) Changes file name

   b) Changes file permissions

   c) Changes directory

   d) None

3. Which symbol is used to redirect output to a file, overwriting existing content?

   a) >

   b) >>

   c) <

   d) |

4. How do you make a script executable?

   a) chmod +x script.sh

   b) exec script.sh

   c) run script.sh

   d) sh script.sh

5. What will 'echo $HOME' print?

   a) Home directory path

   b) Username

   c) Root path

   d) Shell type

6. What is the correct syntax to read a value in bash?

   a) input var

   b) read var

   c) get var

   d) scan var

7. Which command is used to view the current working directory?

a) path

b) showpath

c) pwd

d) cwd

8. What does the command 'rm -r' do?

a) Remove read-only files

b) Remove recursively

c) Remove recently used files

d) None

9. What is the shebang line in a bash script?

a) #script

b) #bash

c) #!/bin/bash

d) //bash

10. How do you append to a file in bash?

a) echo 'text' >> file

b) echo 'text' > file

c) cat > file

d) print >> file

Written Questions:

1. Write a bash script that checks whether a number is positive, negative, or zero.

2. Write a command to create a directory named 'Midterm' and create a file inside it named 'notes.txt'.

3. Write a script to print the numbers 1 to 10 using a for loop.

4. What is the purpose of 'read' command in bash scripting? Explain with an example.

Set 2 - Midterm Questions

MCQs:

1. Which command is used to display the content of a file?

a) show

b) cat

c) list

d) read

2. What does '&&' operator do in shell?

   a) OR

   b) AND

   c) NOT

   d) NAND

3. Which command will show currently running processes?

   a) ls

   b) ps

   c) pwd

   d) whoami

4. How to run a script named test.sh in the current directory?

   a) run test.sh

   b) ./test.sh

   c) test.sh

   d) sh ./test

5. What is the default shell in most Linux systems?

   a) fish

   b) bash

   c) zsh

   d) sh

6. Which command is used to remove a file?

   a) rm

   b) del

   c) erase

   d) remove

7. Which command shows the calendar?

   a) cal

   b) calendar

   c) date

   d) time

8. Which command is used to display the first 10 lines of a file?

   a) tail

   b) head

c) cat

d) more

9. What does 'man' command do?

   a) Opens manual

   b) Runs a command

   c) Sends mail

   d) None

10. What does 'echo "Hello" > file.txt' do?

   a) Appends Hello

   b) Prints Hello

   c) Writes Hello to file

   d) None

Written Questions:

1. Write a script to check if a given number is even or odd.

2. Explain the difference between '>' and '>>' with example commands.

3. Write a bash script to take two numbers as input and print their sum.

4. What is the difference between 'sh script.sh' and './script.sh'?

Set 3 - Midterm Questions

MCQs:

1. What is the purpose of the 'touch' command?

   a) Delete a file

   b) Create an empty file

   c) Copy a file

   d) Rename a file

2. What does the 'grep' command do?

   a) Replace text

   b) Search for a pattern

   c) Sort a file

   d) Edit file

3. What is the output of 'expr 5 + 3'?

   a) 53

   b) 8

c) Error

d) None

4. What is the default file permission of a new file?

　　a) 777

　　b) 755

　　c) 644

　　d) 700

5. What will 'echo $?' show?

　　a) PID

　　b) Exit status

　　c) User ID

　　d) Shell path

6. How do you comment a line in bash script?

　　a) -- comment

　　b) // comment

　　c) # comment

　　d) /* comment */

7. Which symbol is used for piping?

　　a) |

　　b) >

　　c) &

　　d) ^

8. Which command is used to rename a file?

　　a) rename

　　b) mv

　　c) cp

　　d) edit

9. What is 'cron' used for?

　　a) Scheduling tasks

　　b) Network config

　　c) Memory check

　　d) Compiling code

10. What does 'ls -l' display?

a) Long listing format

b) List in columns

c) Load average

d) Linked files only

Written Questions:

1. Write a bash script to calculate the factorial of a number.

2. Explain what happens when you type 'ls | grep txt'.

3. Write a script that checks if a file exists and prints a message accordingly.

4. Explain the difference between absolute and relative path with example.

Set 4 - Midterm Questions

MCQs:

1. What does the 'pwd' command show?

   a) Previous directory

   b) Present working directory

   c) Parent directory

   d) None

2. What does 'whoami' command do?

   a) Tells the OS name

   b) Shows current user

   c) Shows hostname

   d) Lists users

3. What does the 'cd ..' command do?

   a) Changes to root

   b) Moves one directory up

   c) Deletes a directory

   d) Opens hidden folder

4. What does '#!/bin/bash' signify in a shell script?

   a) Path to script

   b) Documentation

   c) Interpreter path

   d) Script ending

5. How to take input in a shell script?

a) scanf

b) cin

c) read

d) input

6. What is the use of '$1', '$2' in bash?

a) Command ID

b) Filename

c) Positional parameters

d) Line numbers

7. What is the output of 'echo "Hello" | wc -c'?

a) 5

b) 6

c) 7

d) 8

8. What does 'tail -n 3 file.txt' show?

a) First 3 lines

b) Last 3 lines

c) All lines

d) Middle 3 lines

9. Which command is used to compare two files?

a) compare

b) cmp

c) diff

d) Both b and c

10. How to display system date?

a) datetime

b) date

c) sysdate

d) time

Written Questions:

1. Write a script to count the number of lines in a file given as an argument.

2. Explain the difference between 'cp' and 'mv' commands.

3. Write a script to display whether a number is divisible by 5 and 11 both.

4. Explain how 'for loop' works in bash with example.