**Question Bank for**

**Unix Programming (16MCA12)**

**Module1:**

1. Discuss the architecture of UNIX operating system with the help of a neat diagram.
2. Write a note on the commands:
3. passwd
4. cal
5. date
6. pwd
7. expr
8. echo
9. bc
10. who
11. tty
12. stty
13. uname
14. printf
15. script
16. spell and ispell
17. clear and tput
18. cat
19. touch
20. sleep and wait
21. set and shift
22. Discuss features of UNIX.
23. Discuss positional parameters used by shell.
24. Explain the concept of exit status with suitable example.
25. Write a note on command line arguments with suitable example.
26. With an example, explain
    1. for loop
    2. while loop
    3. unitl loop
    4. case
27. Write a shell script that reads elements from command line and finds the sum of those numbers.
28. Demonstrate logical operators with an example.
29. Discuss the concept of redirection in UNIX
30. What do you mean by *here document?* Explain with example.

**Module2:**

1. Explain UNIX file system with a neat diagram.
2. Write a note on the commands:
   1. cd
   2. mkdir
   3. rmdir
3. What is the use of **ls** command? In detail, Explain the output of ls –l.
4. Mention the different categories of files that exist in UNIX. Discuss each one of them briefly.
5. Differentiate absolute pathnames and relative pathnames.
6. What do you mean by dot (.) and dot dot (..). Discuss with suitable examples.
7. What is file permission? What are the different ways of setting file permission? Explain.
8. What are the differences between hark links and soft links? Explain.

OR

Explain the concept of soft links and hard links with suitable examples.

1. Explain the following commands: i)chown ii)find iii)umask iv)chgrp v)ln.

**Module-3**

1. Explain the following commands

pr, tr, head, tail, cut, paste, sort, uniq

1. Discuss *grep* command with options.
2. Explain with example basic regular expression and extended regular expression.
3. What is *sed* command? Explain the different ways of addressing *sed*.
4. Explain various options of *sed* command.
5. Explain any 6 basic regular expressions with examples.
6. Discuss filters using regular expressions
7. Explain special characters \* and ? with respect to ERE.
8. Write a short note on substitution.
9. Write a short note on text editing commands.
10. Write a short not on context addressing.
11. What is egrep and fgrep?
12. Discuss the concepts of IRE and TRE.

**Module-4**

1. What is awk? Explain built-in variables used in awk.
2. Explain awk built-in functions with suitable examples.
3. Explain associative array in awk with an example.
4. Briefly explain about BEGIN and END in awk.
5. Write a short note on control flow statements in awk.
6. Briefly explain exporting the shell variables using an example.
7. Write about conditional parameter substitution.
8. Explain eval, exec statements
9. Write a shell script that accepts one or more filename as arguments and convert all of them to uppercase, provided they exist in current directory.
10. Write an awk script to compute gross salary of an employee accordingly rules given below. i) if basic salary is <10000 then HRA=15% of basic & DA=45%

ii) if basic salary is <10000 then HRA=20% of basic & DA=50%

1. Discuss the commands: sh, expr, print, printf

**Module-5**

1. Briefly explain the difference between internal commands and external commands in UNIX.
2. Explain the mechanism of process creation.
3. Explain the different privileges of system administrator.
4. How can any user acquire the status of super user? Explain.
5. Explain the concept of startup and shutdown process.
6. Discuss the commands df and du.
7. Explain the concept of tar and cpio.
8. Write a short note on
9. aliases ii) command history
10. Explain the following environment variables
11. PATH ii) HOME
12. Explain the commands: nice, at, batch, time