

CBCS SCHEME

17CS35



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Third Semester B.E. Degree Examination, Jan./Feb. 2021

Unix and Shell Programming

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- What is Operating System? With a diagram, explain the architecture of UNIX OS. (08 Marks)
 - Explain the following commands with examples :
i) echo ii) ls iii) who iv) date v) tty vi) man. (06 Marks)
 - Differentiate between External and Internal commands in UNIX with suitable examples. (06 Marks)

OR

- Explain the contents of /etc/passwd and /etc/shadow files with respect to UNIX OS. (08 Marks)
 - Explain the Commands used to add , modify and delete a user with examples. (06 Marks)
 - Write a note on man documentation and explain the keyword option. (06 Marks)

Module-2

- With the help of a diagram, explain the Parent – Child relationship in UNIX file system. (06 Marks)
 - Briefly explain the different types of files supported in UNIX. (06 Marks)
 - What is Pathname? Describe the different types of Pathnames, with suitable examples. (08 Marks)

OR

- Which command is used for listing file attributes? Explain the significance of each field in the output. (08 Marks)
 - Assuming that a files current permission are rw -r -xr - -. Write the chmod expressions required to change them for the following : i) rwxrwxrwx ii) r--r-----
iii) ---r----- iv) -----
Using both Relative and Absolute methods of assigning permissions. (08 Marks)
 - Explain the following commands with example :
i) cat ii) mv iii) rm iv) cp. (04 Marks)

Module-3

- Explain the three different modes in which vi editor works and explain how you can switch from one mode to another. (10 Marks)
 - List and explain the navigation commands in vi editor with example. (06 Marks)
 - Explain what these wild - card pattern match :
i) [A - Z] ? ? ? ? * ii) * [! 0 - 9] * iii) * . [!s] [!h] iv) [!a - z A - Z] * . (04 Marks)

OR

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

- 6 a. Explain the standard input, standard output and standard error with respect to UNIX OS. (10 Marks)
 b. With suitable examples, explain the grep command and its various options. (06 Marks)
 c. Explain Shell's Interpretive cycle. (04 Marks)

Module-4

- 7 a. Explain the shell features of 'while' and 'for' with syntax. (08 Marks)
 b. Explain the special parameters used by the shell. (06 Marks)
 c. Distinguish between hard link and soft link, with suitable examples. (06 Marks)

OR

- 8 a. Write a shell program to create a menu and execute a given options based on user choice. Options include i) List of users ii) List of processes iii) Current date and iv) Quit to UNIX. (08 Marks)
 b. Explain the following commands with example :
 i) head ii) tail iii) cut iv) paste (06 Marks)
 c. Briefly explain the sort command with its options. (06 Marks)

Module-5

- 9 a. Explain the three distinct phases of process creation. And explain how shell is created. (08 Marks)
 b. Use find command to locate from home directory :
 i) All files within the extension .html.
 ii) All files having inode number 1006.
 iii) All directories having permissions 777.
 iv) All files not accessed for more than a year.
 v) All but the C program files.
 vi) All files named a.out and all 'c' source files and remove them interactively. (06 Marks)
 c. Explain the nice command with example. (06 Marks)

OR

- 10 a. Explain the following string handling functions of PERL with examples :
 i) length ii) index iii) substr iv) reverse. (08 Marks)
 b. Write a PERL program to determine whether the given year is a leap year or not. (08 Marks)
 c. With examples, briefly explain split and join functions in PERL. (04 Marks)

