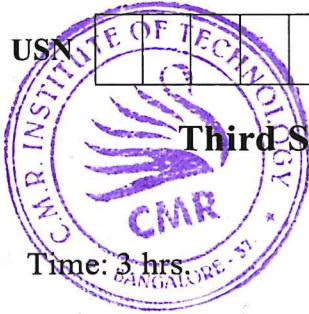


CBCS SCHEME

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15CS35



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

Unix and Shell Programming

Time: 3 hrs

Max. Marks: 80

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

Module-1

- 1 a. Discuss the salient features of UNIX operating system. (08 Marks)
- b. Explain the following commands, with suitable examples:
 - (i) apropros (04 Marks)
 - (ii) whatis. (04 Marks)
- c. Write a note on MAN command. (04 Marks)

OR

- 2 a. With a neat diagram, explain the architecture of UNIX operating system. (08 Marks)
- b. Differentiate between external and internal commands in UNIX with suitable example. (04 Marks)
- c. Explain the following commands with syntax and example:
 - (i) stty
 - (ii) Echo
 - (iii) date
 - (iv) uname(04 Marks)

Module-2

- 3 a. Which command is used for listing file attributes? Explain significance of each field in output obtained with above command. (08 Marks)
- b. Files current permissions are `rw__w__r__`. Write `chmod` expressions required to change them for the following:
 - (i) `r__r____x`
 - (ii) `rw×rw×__x`
 - (iii) `r_xr_xr_x`
 - (iv) `rw×rwxr__`Using both relative and absolute methods of assigning permissions. (08 Marks)

OR

- 4 a. Illustrate with a diagram typical unix file system and explain different types of file supported in UNIX. (08 Marks)
- b. Explain absolute and relative path names with suitable examples. (04 Marks)
- c. Explain following commands with examples:
 - (i) `mkdir`
 - (ii) `HOME`
 - (iii) `rmdir`
 - (iv) `cd`(04 Marks)

Module-3

- 5 a. Explain 3 standard files supported by UNIX. Also give details about special files used for output redirection in UNIX. (08 Marks)
- b. Explain Shell's interpretive life cycle. (04 Marks)
- c. Explain three modes of Vi and explain how you can switch from one mode to another. (04 Marks)

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.

OR

- 6 a. Write UNIX commands for the following:
- Find and replace all the occurrences of unix with UNIX in the textfile after confirming the user (vi editor command)
 - List all the files in PDW which all having exactly five characters in their filename, any number of characters in their extensions.
 - To copy all files stored in /home/vtu with .c, .cpp and .java extensions to progs directory in current directory.
 - To delete all filenames containing * in their filenames.
 - To delete all files with three character extensions except .out from current directory.
 - To display (List) contents of current directory and its subdirectories.
 - Searching for a pattern in backward direction.
 - Writing the first 50 lines to another files. (08 Marks)
- b. With suitable examples explain grep command and its options. (04 Marks)
- c. Briefly explain the extended regular expressions with an example. (04 Marks)

Module-4

- 7 a. What is shell programming? Write a shell program to create a menu and execute a given options based on user's choice. Options include
- List of users
 - List of processes
 - Content of files
 - Quit to UNIX
 - Current date
- (10 Marks)
- b. Explain with an example set and shift commands in UNIX to manipulate positional parameter with example. (06 Marks)

OR

- 8 a. Explain the following statements with syntax and example:
- if
 - for
 - while
 - case.
- (10 Marks)
- b. Explain use of test and [] to evaluate expression in shell. (06 Marks)

Module-5

- 9 a. Write a perl program that prompt user to input string and a number and print string those many times on different lines to standard output. (08 Marks)
- b. Explain with example the string handling function supported by perl. (08 Marks)

OR

- 10 a. Explain lists, Arrays and Associative arrays with respect to perl. (08 Marks)
- b. Write a perl script to convert decimal number to binary numbers. (08 Marks)

