

S.No. : 159

BCA 2401

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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 21116

Roll
No.

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BCA. Examination 2018-2019

(Even Semester)

UNIX AND SHELL PROGRAMMING

Time : Three Hours]

[Maximum Marks : 60

Note :- Attempt all questions.

SECTION – A

1. Attempt all parts of the following : 8 × 1 = 8

(a) Explain the following :

(i) System calls

(ii) Library functions

(b) Describe the following commands :

(i) Stty

(ii) Man

(c) Explain sticky bit with example.

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- (d) U mask value 022 recognizes which permissions on file and directories respectively.
- (e) How to compile and run a C Program com unix?
- (f) Write a procedure to create, save and quite from vi editor.
- (g) Explain the anchoring characters.
- (h) Explain the shell's for loop giving the list from variables.

SECTION – B

- 2. Attempt any two parts of the following : $2 \times 6 = 12$
 - (a) With a neat diagram explain the architecture of UNIX Operating System.
 - (b) What is file permission? Explain how to use 'chmod' command to set the permissions in a relative manner with an example.
 - (c) Explain the three different modes in which 'Vi' editor works.
 - (d) Explain the shell features of :
 - (i) While
 - (ii) 'for' with syntax

SECTION – C

Note :- Attempt all questions from this section.

- 3. Attempt any two parts of the following : $2 \times 5 = 10$
 - (a) Give the significance of the seven fields of the 'ls-l' command, explain each.
 - (b) Draw the tree structure of the file system created by the following commands (assume you are in the directory /usr/office). Why is it not possible to issue the command rmdir/usr/office/right.
 - \$ mkdir left
 - \$ mkdir middle
 - \$ mkdir right
 - \$ Cd left
 - \$ mkdir left middle right
 - \$ Cd../ Middle
 - \$ mkdir dirl dir 2 / usr/office/right/dir 3
 - (c) Explain with examples :
 - (i) Absolute path name and relative pathname
 - (ii) Internal and external commands.

4. Attempt any two parts of the following : $2 \times 5 = 10$

- (a) Explain the mechanism of process creation and draw the neat and clean diagram.
- (b) Assuming that a file's current permission are `rw xr - - r - x`, specify the `chmod` expression required to change them to :
- (i) `rw xrwx r - x`
 (ii) `r - x r r - x - - x`
 (iii) `- - - r - - - r - x`
 (iv) `- - - rw - r - -`

using both relative and absolute methods of assigning permissions.

(c) Explain the following filters with examples :

- (i) `head`
 (ii) `tail`
 (iii) `cut`

5. Attempt any two parts of the following : $2 \times 5 = 10$

(a) Explain what these wild card pattern match :

- (i) `[A-Z]???*`
 (ii) `*[0-9]*`

(iii) `*[!0-9]*`

(iv) `*[!S][!h]`

(b) (i) Use 'find' to locate all files named a.out and all c source files in your home directory tree and remove them interactively.

(ii) Display only the names of all user who are logged in and also store that result in `user.txt`.

(iii) Invoke the vi-editor with the last modified file.

(iv) Use 'find' command to locate from your home directory all files with the extension `html`.

(v) Use 'find' command to locate from your home directory all directories having permission `666`.

(c) Briefly explain 'set' and 'shift' commands in UNIX to manipulate positional parameters with example.

6. Attempt any two parts of the following : $2 \times 5 = 10$

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- (a) Explain the special parameters used by the shell.
- (b) What is shell programming? Write a shell script to create a menu which displays.
 - (i) List of files
 - (ii) Contents of a file
 - (iii) Process status
 - (iv) Current date
 - (v) Clear the screen
 - (vi) Current users of system
- (c) Define a shell script. What are the two ways of running a shell script? Write a shell script to accept pattern and a file.
