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Paper Code : BCAC601 Unix and Shell programming
UPID : 600105

CS/BCA(A)/EVEN/SEM-6/600105/2024-2025/1103

Full Marks : 70

Time Allotted : 3 Hours

The Figures in the margin indicate full marks.
Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

[1 x 10 = 10]

1. Answer any ten of the following :

- (i) In the output of the ls -l command, the first character is a "-". What does it indicate?
- (ii) What is the significance of ~ symbol in UNIX?
- (iii) What are the different purposes of the cat command in UNIX?
- (iv) What is the function of find command in UNIX?
- (v) Give the command in UNIX to display process attributes.
- (vi) Which symbol will be used with grep command to match the pattern pat at the beginning of a line?
- (vii) What does the boot block contain?
- (viii) Differentiate between shell and kernel
- (ix) In UNIX, how many characters a filename can contain?
- (x) Give the UNIX command to copy multiple files to a directory.
- (xi) Write the command to create soft link in UNIX?
- (xii) How to perform premature termination of a process?

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

2. Write a shell script to print (i) user information who currently login, (ii) current date & time, (iii) the number of user logged in, and (iv) print sorted list of users. [5]
3. Explain zombie and orphan process. [5]
4. What do you mean by soft link and hard link? [5]
5. What do mean by UNIX process life cycle. Give a diagram of the UNIX process life cycle. [5]
6. What is internal command? What is external command? What is the purpose of cal command? [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

7. (a) What do you mean by file ownership in UNIX? Explain briefly? [7]
(b) How to list directory attributes in UNIX? [2]
(c) When you use long listing of files in UNIX, the list is preceded by a very important information (i.e. total <some numeric value>). What is this information? Explain briefly? [6]
8. (a) How to count lines, words and characters in a file in UNIX? [6]
(b) Briefly explain the cmp command in UNIX. [6]
(c) What is the function of lp command? [3]
9. (a) Explain briefly the file permission in UNIX. [5]
(b) What are the types of permissions? [3]
(c) What are the types of user for which you can set the permissions? [3]
(d) Explain briefly the following permissions: (i) -rw-----, (ii) -rw-r--r--, (iii) -rwx--x--x, (iv) drwxr-x--- [4]
10. (a) Write a shell script to Generate Fibonacci Series. [8]
(b) Write a shell script to find the sum of digits of a number. [7]
11. (a) What do you mean by absolute path name and relative pathname? [5]
(b) How to create and delete directories? [2]
(c) What are the important rules when deleting directories? [3]
(d) How to list the contents of the current directory and how to list all the files including hidden files? [3]

(e) How to list the files sorted by modification time?

[2]

*** END OF PAPER ***