

**BCA/D-21**

**1238**

**LINUX AND SHELL PROGRAMMING**

Paper-BCA-CTIS-108

Time : Three Hours]

[Maximum Marks : 60

**Note :** Attempt any *five* questions in all, selecting at least *one* question from each unit including Question No. 1 is compulsory.

**Compulsory Question**

1. (a) Write the following relational expression in Korn shell.
  - (i)  $x \neq y$
  - (ii)  $x = y$ .
- (b) What are environmental variables?
- (c) Explain foreach loop in C-shell.
- (d) What is Terminal File?
- (e) Write a note on external linux commands.
- (f) Explain case-esac statement in Korn shell. (2×6=12)

**UNIT-I**

2. (a) Give a brief sketch of structure of Linux Operating System?
- (b) What are the features of Linux operating system?

(6,6)

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3. (a) Distinguish between time sharing and client-server environment?  
(b) What is a shell ? Explain its types . (6,6)

**UNIT-II**

4. Write syntax and purpose of following commands :
- (a) uname.
  - (b) lock.
  - (c) rd.
  - (d) cp.
  - (e) cmp.
  - (f) Is. (2×6=12)
5. (a) What is the purpose of following directories :
- (i) \usr.
  - (ii) \bin.
  - (iii) \temp.
- (b) How do you find a line that matches a regular expression using awk command ? (6,6)

**UNIT-III**

6. (a) Name two categories of regular files? Does Linux recognize the difference between these two categories?  
(b) Write a shell program to check a number is prime or not prime. (6,6)
7. Explain :
- (a) tee command.
  - (b) ftp and its importance in Linux.
  - (c) What are pipes? (4,4,4)

#### UNIT-IV

8. (a) Brief about the common commands used in vi editor.  
(b) Define grep command. Write a grep command to display the lines which does not match the given pattern. (6,6)
9. (a) How do you use a variable in Korn shell? Describe different types of variables used in Korn shell.  
(b) Write a shell program to display a given number is Armstrong or not. (6,6)

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