



DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH. SEMESTER I [CE/IT/MECH]

SUBJECT: (CT-115) LINUX OPERATING SYSTEM AND PROGRAMMING

Examination	: Second Sessional	Seat No.	: _____
Date	: 25/09/2013	Day	: Wednesday
Time	: 9:30 to 10:45	Max. Marks	: 36

INSTRUCTIONS:

1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 Answer the Following : [12]

(A) Write command(s) to perform the following tasks: [3]

- 1) To list out attributes of directory along with inode number.
- 2) To change the default directory permission of any directory to **rwxr-----**
- 3) Assume that file a.txt contains 20 lines. Using VI editor commands, copy from current line up to line 17 in file b.txt

(B) State and explain output(s) of following: [5]

- 1) `x=5;PS1="[! \h $PWD $PS1 $x]"`
- 2) After above command if `unset x` is executed then what will be the change in prompt? Why?
- 3) `lp a[0-4][0-9]*.???`
- 4) (i) `ls .` (ii) `ls ..`
- 5) (i) `ls .*` (ii) `ls . *`

(C) Differentiate the outputs of following commands: [4]

- 1) `ls -lia | tee Device` v/s `ls -lia>Device`
- 2) `rm *.[!cpp]` v/s `rm *.[!c][!p][!p]`

Q.2 Answer the following. [12]

(A) Describe file descriptors 0,1 and 2 in detail [3]

(B) Describe hard link and soft link in detail. [3]

(C) Describe following commands [4]

- 1) `chgrp` 2) `touch` 3) `tee` 4) `paste`

(D) Differentiate the local and environment variables. [2]

OR

Q.2 Answer the following. [12]

(A) Explain different ways to change file permissions with example. [3]

(B) Discuss the modes of Vi editor in detail. [3]

- (C) Consider following commands are executed in sequence and content of ddu is "Hello Students". Describe output of all command. [6]

```
ln ddu computer
ln computer mech
ln -s ddu it
ln -s computer ec
ln -s ec ch
ln -s mech ic
cat ch
rm computer
cat it
cat mech
cat ec
cat ch
cat ic
```

Q.3 Answer the following: [12]

- (A) Consider content of ddu.txt file as follows. [3]

```
Roll_NO:Name:CPI:SUBJECT
1:ABC:9.1:LOSP
2:DEF:8.3:C_Prg
3:MNO:6.2:BEEE
4:HIJ:4.6:EG
5:XYZ:7.6:MATHS
6:GHI:6.9:EM
```

From this retrieve all the student's name and CPI in sorted order (as per name) and store that sorted output in file named as myfile.txt

- (B) Consider above file (ddu.txt) and in that file using vi editor change name of subject C_Prg to C_PROGRAMMING [2]
- (C) Explain use of following meta characters with example: [4]
- (i) * (ii) { }
- (iii) [] (iv) !
- (D) Explain use of pipe (|) in Linux. [3]

OR

Q.3 Answer the following: [12]

- (A) find \$HOME \((-type -f -o -name *.?) ! -perm 744 \) -exec mv {} ./MyFolder \ [3]
- Is this command line valid? If yes, what will be the output?
- (B) Explain following commands in detail. [2]
- 1) history 2) alias
- (C) Explain directory permissions in detail. [4]
- (D) Explain head and tail command in detail. [3]

