

**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) Explain the working of the commands :- (cat a1 a2) > a3 & cat a1 a2 > a3. Is there any difference between the two? **[2]**
- (B) Which of the following is not a right way to get into the current user's home directory? **[1]**  
(a) cd - (b) cd ~ (c) cd \$HOME (d) cd
- (C) The \_\_\_\_\_ interacts with the hardware and the \_\_\_\_\_ interacts with the user. **[1]**
- (D) Explain the working of the following command :- (cal;ls) | wc >> f1 **[2]**
- (E) (i) State true/false: Renaming a file changes the i-node number of the renamed file. **[2]**  
(ii) State true/false: Copying a file changes the i-node number of the new copied file.
- (F) Which of the following is/are not a valid file name? **[1]**  
(a) -abc (b) /a1 (c) .ab.c (d) 123a
- (G) Give the command to see ALL the files in the current directory. **[1]**
- (H) Convert the following number from Decimal to Octal Number System using bc. **[2]**  
Number:- 20

**Q.2 Answer the following.****[12]**

- (A) Explain characteristics of Linux with suitable example. **[4]**
- (B) Give a list of all important information available through the date command. **[4]**
- (C) Give commands to **[4]**  
(i) display (iii) remove  
(ii) move (iv) find the size  
for the content of current directory. Give proper command line for each.

**OR**

- (C) Give the output for the following command lines: **[4]**  
(i) \$ od -bc file1 (iii) \$ alias df='diff f1 f2'  
(ii) \$ cmp -c f1 f2 (iv) \$ tput clear

**Q.3 Answer the following:****[12]**

- (A) Use the ls command to list all .doc files in the current directory, take a word count (wc) by the amount of lines and display the output to the terminal as well as save in the file count.txt. **[3]**
- (B) Explain the differences between echo & printf commands with example. **[4]**
- (C) Explain output of ls -l in detail with example. **[5]**

**OR****Q.3 Answer the following:****[12]**

- (A) Write down at least three different way of creating a file with proper command lines. **[3]**
- (B) Explain more & less pagers with example. **[4]**
- (C) Explain comm and diff command. What are the main differences between them? **[5]**





DHARMSINH DESAI UNIVERSITY, NADIAD  
FACULTY OF TECHNOLOGY

B.TECH. SEMESTER I [CE/IT/MECH]

SUBJECT: LINUX OPERATING SYSTEM & PROGRAMMING

Examination : Block Sessional

Seat No. : \_\_\_\_\_

Date : 9/11/2012

Day : \_\_\_\_\_

Time : 11 to 12:15 pm

Max. Marks : 36

**INSTRUCTIONS:**

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**Q.1 Do as directed.**

- (a) When the shell finds metacharacters in the command line what does it do? When the command is finally executed? [12]
- (b) Explain the difference between internal and external command. [2]
- (c) What is meant by recursive behavior of a command? Name two commands, along with suitable example. [2]
- (d) What is symbolic links? How it differ from hard links? [2]
- (e) What is umask? [1]
- (f) How will you locate 40th character of a line? [1]
- (g) What will cat abc abc abc display? [1]
- (h) Write a command to count number of times character "&" occurs in file file1. [1]

**Q.2 Attempt the following questions.**

- (a) Write a shell code to accept a string from the terminal, and echo a suitable message if it doesn't have at least 10 characters using (i) case (ii) expr [12]
- (b) Write a shell script to find GCD (greatest common divisor) of two numbers. [4]
- (c) Describe briefly the UNIX architecture explain the role played by the kernel and shell in sharing the workload. [3]
- (d) What will be the output: [3]
- (i) `cut -d \ | -f 2,3 file1 | tee file2` [2]
- (ii) `grep "a[Bb]nqo{x,y}" ./dir1/*`

**Q.3 Attempt the following questions.**

- (a) Write a shell script for the following pattern : [12]
- A [6]
- B C
- D E F
- G H I J
- (b) (I) Examine the output of a two command below. Explain whether kumar can (i) edit (ii) delete (iii) change permission (iv) change ownership of file1. [4]
- \$ who am I ; ls -l file1
- Kumar
- r--rw---- 1 sumit kumar 75 nov 12 16:45 file1
- (II) Explain IRE and TRE with examples. [2]





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**FACULTY OF TECHNOLOGY**

**SUBJECT: (CT-115) LINUX OPERATING SYSTEM AND PROGRAMMING**  
**B.TECH. SEMESTER I [IT/CE/MECH]**

**Examination : First Sessional**

**Date : 22/08/2012**

**Time : 09:30 to 10:45**

**Seat No. :**

**Day : Wednesday**

**Max. Marks : 36**

**INSTRUCTIONS:**

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**Q.1 Answer the Following :**

- (A) What is the difference between echo "\$SHELL" and echo '\$SHELL'? [12]
- (B) What is the significance of the following command line? [2]
- 1) \$ wc factorial.c ; ls -l factorial.c [2]
  - 2) \$ ls -l factorial.c | wc
- (C) Explain the significance of the interrupt and eof characters. With which keys are they associated on your system? [2]
- (D) 1) By which Linux command we can know whether the command is Internal or External. [2]
- 2) How can we move a group of files to a different directory in one command?
- (E) Why we can say that Linux is a virus free operating system? [2]
- (F) What is meant by PATH variable? Why is proper setting of the PATH variable important? [2]

**Q.2 Answer the following. (Any three)**

- (A) Explain ls command in detail with all options. [12]
- (B) What you mean by Absolute and Relative Path. Give proper example. [4]
- (C) Explain Kernel Shell architecture. [4]
- (D) Explain date command in detail with example. [4]

**Q.3 Answer the following:**

- (A) Explain the File system of Linux operating system. [12]
- (B) Explain "diff" command with proper example. [3]
- (C) Write the command line for the following: [5]
- 1) Convert the following number from Decimal to Binary using bc command. [2]
  - Number : 14
  - 2) Remove a directory using rm command.
- (D) Give the output for the following command line: [2]
- 1) \$ od -bc factorial.c
  - 2) \$ tput -cup 5 10

**OR**

**Q.3 Answer the following:**

- (A) Explain the characteristics of Linux operating system. [12]
- (B) Explain "comm" command with proper example. [3]
- (C) Write the command line for the following: [5]
- 1) Copy the content of one directory to another. [2]
  - 2) Merge two files and store the result in a third file.
- (D) Give the output for the following command line: [2]
- 1) \$ cal -j
  - 2) \$ date +"%I %M"