DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
SECOND SESSIONAL
SUBJECT: (CT-116) ELE. OF LINUX OS & C PROG. -I

Examination	**: B.TECH - Semester - I**	**Seat No.**	**:**
Date	**: 05/10/2017**	**Day**	**:**
Time	**: 3:45 to 5:00**	**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 Do as directed.

(a) State whether following statement is true or not with justification: "A symbolic link has same inode number as file it is linked to." [1]

(b) Which of the following is the default mode in VI editor? [1]
1) ex. mode 2) command mode 3) default mode 4) input mode

(c) Write a command to kill last background process without knowing its PID? [1]

(d) Which variable counts number of arguments from command line? [1]
1) $1 2) $? 3) $# 4) $*

(e) What is significance of the PID and PPID? [2]

(f) Explain what the following commands do w.r.to vi editor: [2]
(I) **: . , 10w foo** (II) **:$ w! foo**

(g) Explain working of shift command. [2]

(h) How can you judge whether two files are copies or hard links? How do you find out how many hard links are there for particular file? [2]

Q.2 Attempt ***Any TWO*** of the following questions. **[12]**

(a) Explain in detail: Basic structure of C program. [6]

(b) Assume the output of *date* commad is**:** Thu Oct 5 11:10:10 IST 2017.
Write a command to perform following tasks: [6]
(I) From current directory remove all regular files for which either permission is 640 or it is not modified in last year.
(II) Locate all files named *a.out* or *core* in your home directory tree and remove them interactively.

(c) (I) Write steps of compilation and running a c program in gcc. What is the significance of **– o** option in compilation? [3]
(II) Which all attributes of file are stored in i-node? [3]

Q.3 (a) Write a shell script to find factorial of given number. [6]

(b) Write a shell script to print following series as output. Support display of n terms using while. [6]
Ex. n as 7, displays: 2 4 6 8 10 12 14

OR

Q.3 (a) Write a shell script to find maximum and minimum from given n numbers. Where value of n is entered by user at command line and read all n number via script. No need to retain all input. [6]

(b) Write a shell script to generate fibonacci series upto n numbers. [6]
Ex. n as 7, displays: 1 1 2 3 5 8 13
{Note: In fibbonacci series every number is represented as sum of previous two numbers, except the first and second which are 1.}