B. Tech. (Sem. III) (Main / Back) Examination, December - 2017
Computer Sc. & Engg.
3CS4A Linux and Shell Programming

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 26

*Attempt any five questions, selecting one question from each unit.
All Questions carry equal marks. Schematic diagrams must be
shown wherever necessary. Any data you feel missing suitably be
assumed and stated clearly. Units of quantities used / calculated
must be stated clearly.*

Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)

## UNIT - I

1   (a)   What is Permissions ? How can we apply permissions for the files and directories ?

8

(b)   Explain the linux file system architecture with the help of its diagram.

8

**OR**

1    Explain the following commands with their syntax and examples :

(i)    Uname

(iii)   ls - lR

(v)    mount -v-o

(vii)   gcc -o prog.c

(ii)    stty

(iv)    chmod --x

(vi)    ln

(viii)   touch

8×2=16

## UNIT - II

2    (a)    Explain the programming utility in linux file system.

8

       (b)    How can we use the debugging C programs using gdb ?

8

### OR

2    (a)    What is exrc file for different setting parameters ? Explain.

8

       (b)    Describe the advance editing techniques.

8

## UNIT - III

3    What do you mean by X ? Explain different components of X and also describe the X-clients.

16

### OR

3    Write short notes on the following :

(i)    xinitrc file

(ii)   Concept of window manager.

8×2=16

# UNIT - IV

4 (a) What is redirection ? Explain input output and error redirection.

8

(b) Write short notes on :
   (i) Types of shell
   (ii) Command line editing

4×2=8

## OR

4 (a) What do you mean by directory stack manipulation ? Explain.

8

(b) Write short notes on :
   (i) Variables and keywords
   (ii) Piping process

4×2=8

# UNIT - V

5 (a) What is the Here document ? Explain.

8

(b) Write a shell script to generate the factorial of N numbers using through keyboard.

8

## OR

5 Explain the following terms :
   (i) Aliases
   (ii) Source code management
   (iii) awk utility
   (iv) NULL or USET variables.

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