Roll No.

B.C.A.

FIFTH SEMESTER EXAMINATION, 2018-19
UNIX AND SHELL PROGRAMMING

Time : **3 Hours**   Max. Marks : **60**

Note : (i) Attempt **ALL** questions.
     (ii) Choices are given in each question set.

1. Attempt any **Four** of the following questions: **3 x 4 = 12**

   (a) Discuss the architecture of UNIX operating system.

   (b) Explain UNIX file system layout.

   (c) Discuss various file and directory related commands in UNIX.

   (d) Explain the following with suitable example:

   (i) chmod   **(ii)** ls

   (iii) diff   **(iv)** cal

   (v) who am i

   (e) What is Inode table in UNIX file system? How Inode is allocated to a new file?

   (f) What is the use of the following commands in UNIX? Explain with suitable example.

   (i) tty   **(ii)** date

   (iii) ulimit   **(iv)** dfspace

   (v) man

2. Attempt any **Four** of the following questions: **3 x 4 =**

12

(a) Explain various process states. How a new process created in UNIX?

(b) What is parent child process in UNIX? Explain fork() in UNIX.

(c) Discuss various process related commands with suitable example.

(d) Explain Cron daemon in UNIX. Discuss various commands related to Cron daemon.

(e) Define various modes of vi editor. Explain with diagram how we can switch from one mode to another mode in vi editor.

(f) Differentiate between foreground and background process. How a process is executed as background process?

 (3) read   **(4)** $?

 (5) sh

 (ii) Write a shell script to check whether the entered file is a file or directory.

5. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) Discuss grep with different attributes. Explain egrep and fgrep with suitable example.

3. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) (i) Discuss various administrative tasks of UNIX system administrator.

(ii) How security is provided in UNIX?

(b) (i) Explain various commands of user management in UNIX.

(ii) Discuss init with different run levels.

(c) Explain the following with suitable example:

(i) mount   (ii) crypt

(iii) rsh   (iv) su

(v) cpio

4. Attempt any **Two** of the following questions: **6 x 2 = 12**

(a) (i) Explain various types of test using Test command.

(ii) Write a shell script to calculate the factorial of a given number.

(b) (i) Write a shell script to generate Fibonacci series of n numbers entered by the user.

(ii) Write a shell script to find out the largest of three numbers.

(c) (i) Explain the following with suitable example:

(1) echo   (2) expr

(b) (i) Discuss different text formatting tools with suitable example.

(ii) Explain the following with suitable example:

(1) tail   (2) head

(3) tr   (4) sort

(5) cut

(c) Write short note on sed and awk.