B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2017

00724

BICS-026 : UNIX INTERNALS AND SHELL PROGRAMMING

Time : 3 hours　　　　　　　　*Maximum Marks : 70*

Note : *Answer any **seven** questions. All questions carry equal marks.*

1. What do you mean by an Operating System ? Explain the differences between Windows and Unix operating systems. *10*

2. Explain the role of a kernel in an operating system in detail, with the help of suitable example. *10*

3. What do you mean by Command ? What is a filter command ? Explain any two filter commands with their use, syntax and at least two options. *10*

4. What is a Pipe ? How is it different from Redirection ? Explain the differences using suitable examples. *10*

5. What is a Process ? Explain the concept of process creation in Unix in detail, with the help of suitable example.   *10*

6. Explain the concept of INIT daemon process in detail. Also explain the process to kill the daemon process.   *10*

7. Write a shell script to find the factorial of a given number. Consider all possibilities for negative, zero and positive numbers.   *10*

8. Write a shell script to generate a matrix of order n * m and print that matrix in reverse order.   *10*

9. What do you mean by semaphore ? Explain the concept and types of semaphores in detail, with the help of suitable example.   *10*

10. Write short notes on the following :   *10*

   (a) File Structure in Unix

   (b) System Calls in Unix

   (c) Process States

   (d) Inter-process Communication in Unix