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BICS-026

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

Term-End Examination

00466

June, 2016

BICS-026 : UNIX INTERNALS AND SHELL PROGRAMMING

Time : 3 hours *Maximum Marks : 70*

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

1. Explain the architecture of UNIX operating system. *10*

2. How are the blocks of file system organised in four categories ? Explain each of them. What are the different ways of setting file permissions ? Explain. *10*

3. Explain the algorithm for assigning new nodes. *10*

4. What do you mean by a 'Daemon' ? Explain the function of INIT daemon. How do you kill daemon ? *10*

5. What are process states and transitions ? Explain with the help of neat sketches. *10*

6. List the sequence of events that occurs when one turns on the computer. Give the syntax and uses of the following utilities : *4+6*

   (a) df

   (b) cron

   (c) mkfs

7. (a) Briefly explain passing arguments to scripts. *5*

   (b) Explain network communication socket. *5*

8. Write down the advantages and disadvantages of buffer cache. *10*

9. What is a process ? Explain how a process is created using the three primitives : fork, exec and wait. *10*

10. Explain any ***two*** of the following : *2×5=10*

    (a) INIT Process

    (b) Shell and Environmental Variables

    (c) Distributed UNIX System