Hall Ticket No | | | | | | | | | | | Question Paper Code: ACS010

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

B.Tech VI Semester End Examinations (Regular) - May, 2019

Regulation: IARE – R16

LINUX PROGRAMMING

Time: 3 Hours **(CSE)** **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Write a short note on history on UNIX and explain architecture and features of UNIX. **[7M]**
   (b) Illustrate by writing script that will print, Message "Hello World, in Bold and Blink effect, and in different colors like red, brown etc using echo command. **[7M]**
2. (a) Explain the different types of files supported in Linux and compare hard link and soft link files. **[7M]**
   (b) Using sed, how do you add the tags <HTML> at the beginning and </HTML> at the end of a file? **[7M]**

UNIT – II

3. (a) Define shell? Explain quoting and file name substitution in Linux with suitable examples. **[7M]**
   (b) Explain by writing a script using system time, to show GOOD MORNING, GOOD AFTERNOON, GOOD NIGHT. What does the .(dot) indicate at the beginning of a file name and how should it be listed? **[7M]**
4. (a) Illustrate control structures supported by Linux programming with suitable syntax. **[7M]**
   (b) Write a C code to display files which has read, write and execute permissions? **[7M]**

UNIT – III

5. (a) Compare and contrast Zombie and Orphan process with suitable code. **[7M]**
   (b) What is process status (ps) and explain the procedures for process creation, replacing a process image, waiting for a process, process termination, Zombie process. **[7M]**
6. (a) What is signal. Explain various signal functions with suitable examples. **[7M]**
   (b) Write a program to find sum of odd numbers by child process and sum of even numbers by parent processes of given range numbers using fork function. **[7M]**

UNIT – IV

7. (a) Differentiate named and unnamed pipes? Write a program that uses a pipe to allow the parent process to read a message from its child. **[7M]**

   (b) What is semaphore? Explain semaphore systems calls and write a program for locking a file using semaphore. **[7M]**

8. (a) What are pipes? Explain their limitations. Explain how pipes are created and used in IPC with an examples. **[7M]**

   (b) What is message queue? Write a program to transfer amount of data between two processes using message queues. **[7M]**

UNIT – V

9. (a) What are Berkeley sockets? Write a short note on various socket options. **[7M]**

   (b) Explain about TCP client server communication with a neat digram. **[7M]**

10. (a) Demonstrate client and server programming using UDP protocol with a neat diagram. **[7M]**

    (b) Write a C program to implement client and server communication using UDP. **[7M]**

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