Code No: R32054 **R10** **Set No: 1**

III B.Tech. II Semester Regular Examinations, April/May -2013

UNIX PROGRAMMING

(Computer Science and Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) Explain the following commands with suitable examples.
   umask, tar, chmod, mkdir, rmdir, chdir, chown,cpio,sort.
   (b) Explain about the features of UNIX. [8+7]

2. Explain the following:
   (a) Shell meta characters
   (b) shell variables
   (c) shell commands [5+5+5]

3. (a) Explain about the UNIX file system structure.
   (b) Explain the following commands with suitable examples.
   umask, chmod, mkdir, rmdir, chdir, chown, cpio, sort. [8+7]

4. (a) Define process. Explain about process structure.
   (b) Explain in detail about zombie process.
   [8+7]

5. (a) Explain in detail about interrupted system calls.
   (b) Explain in detail about abort and sleep functions. [8+7]

6. Briefly explain about the following IPCs:
   (a) FIFO
   (b) Pipes
   (c) Name spaces [5+5+5]

7. (a) Explain in detail about Advisory Locking versus Mandatory Locking.
   (b) Explain in detail about File Locking versus Record Locking. [8+7]

8. List the comparison of Sockets, TLI, Message Queues and FIFO's. [15]

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Code No: R32054 **R10** **Set No: 2**

III B.Tech. II Semester Regular Examinations, April/May -2013

UNIX PROGRAMMING

(Computer Science and Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) Explain in detail about file permissions and process utilities.
   (b) Explain in detail about backup utilities. [8+7]

2. (a) Explain in detail about pipes and input Redirection.
   (b) Write a shell script to find out whether a given number is prime number or not. [8+7]

3. (a) Briefly explain about the following system calls:
   open, create, close , read and write.
   (b) Briefly explain about the following system calls:
   lseek, syslink, stat, octl, chmod, chown. [8+7]

4. Explain the following system calls with clear syntax and example:
   (a) fork( ) (b) wait( ) (c) exec( ) [8+7]

5. (a) Explain in detail about interrupted system calls.
   (b) Explain in detail about alarm and pause functions. [8+7]

6. Briefly explain about the following IPCs:
   (a) Streams and Messages.
   (b) Name spaces [8+7]

7. Define Semaphore. Explain in detail about kernel data structures for a Semaphore Set. [15]

8. Explain in detail about Socket system calls for Connection Oriented Protocol. [15]

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Code No: R32054 **R10** **Set No: 3**

III B.Tech. II Semester Regular Examinations, April/May -2013

UNIX PROGRAMMING

(Computer Science and Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1. (a) Explain in detail about disk utilities and text processing utilities.
   (b) Explain in detail about Unix file system with neat diagram. [8+7]

2. (a) Define Shell. Explain in detail about shell responsibilities.
   (b) Write a shell program to arrange three numbers in ascending order. [8+7]

3. Define System call. Explain in detail about Directory handling System calls. [15]

4. (a) What is an orphan process? Write a program to illustrate orphan process.
   (b) Explain various exit statuses with an example program. [8+7]

5. Explain the following with example:
   (a) Process Creation
   (b) Process Termination
   (c) Signal function
   (d) Reliable signals. [15]

6. (a) Explain the advantages of FIFOs over pipes.
   (b) Write a C program to illustrate two way communication using FIFOs. [8+7]

7. Explain in detail about Locking routines using Semaphores. [15]

8. Explain in detail about Socket system calls for Connectionless Protocol. [15]

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Code No: R32054 **R10** **Set No: 4**

III B.Tech. II Semester Regular Examinations, April/May -2013

UNIX PROGRAMMING

(Computer Science and Engineering)

Time: 3 Hours **Max Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) Explain about unix file structure.
   (b) Explain about the following commands:
   ulimit, ps, finger, uniq, grep, awk, tar. [8+7]

2. (a) Explain the working environment or built-in variable of shell
   (b) Write a shell program to arrange three numbers in ascending order. [8+7]

3. Define System call. Explain in detail about file and directory maintenance System calls. [15]

4. (a) Explain in detail about Zombie process and Orphan process.
   (b) Differentiate between fork( ) and vfork( ). [8+7]

5. (a) Explain in detail about unreliable signal.
   (b) Explain in detail about kill and raise functions. [8+7]

6. (a) Explain the advantages of FIFOs over pipes.
   (b) Write a C program to illustrate two way communication using FIFOs. [8+7]

7. Define Semaphore. Explain in detail about various Semaphore System Calls. [8+7]

8. Explain in detail about Elementary Socket System Calls. [15]

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