Code No: 5405AN **R17**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech II Semester Examinations, June/July - 2019
NETWORK PROGRAMMING
(Computer Science)

Time: 3hrs **Max.Marks:75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5 × 5 Marks = 25

1.a) Write a shell script to display multiplication table. [5]
b) What is orphan process? How it is created? Explain. [5]
c) Describe unreliable and reliable signals. [5]
d) Explain fcntl() system call with the help of examples. [5]
e) Discuss about basic RMI process. [5]

PART - B

5 × 10 Marks = 50

2. Give examples to explain the concept of filters. [10]

OR

3.a) Write a shell script to test whether the given number is prime or not.
b) Write the syntax for the rmdir, cp, rm commands and explain with examples. [5+5]

4. Explain the system calls used for file locking and record locking with the help of syntax and appropriate examples. Compare above locking techniques. [10]

OR

5. Explain the below system calls with help of syntax and quote relevant examples for each.
(a) fork (b) exit (c)wait (d) waitpid (e)exec [10]

6.a) What are the different APIs available for messages? Explain with the help of syntax and examples.
b) Write about kernel data structures for the message queues. [5+5]

OR

7. Write a client server program using pipes. Client has to send a filename to the server. Server has to read the file if exists and send its contents to the client. If the file does not exists server has to send error message "file does not exist". After receiving the contents from server client has to display the contents on screen. [10]

8. Describe the system calls used for connectionless protocol with syntax. [10]

OR

9.a) Explain about "shmget" and "shmat" system calls.
b) Explain, how to place "Data in shared memory". [5+5]

10.a) Develop a server program that can handle one connection at a time.
b) Explain how do we create and handle datagram sockets. [5+5]

OR

11. Explain how to implement client server application using Remote Method Invocation concept. [10]

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