**Amrita Vishwa Vidyapeetham**

**Amrita School of Engineering**

**20CYS281-Operating systems**

**Lab Evaluation**

**2021 Batch**

**Time : Two hours Marks: 30 marks**

1. Write a program using fork() system call to create two child of same process (i.e parent p having child process p1 and p2? (5 marks)

2. Write a program using fork() system call to create a hierarchy of 3 process (P, P1,P2) such that P2 is the child of P1 and P1 is the child of P. (5 marks)

**Write Linux Commands for the following 10 marks**

1. Search for files in a specified directory hierarchy and all its subdirectories

2. To print recently used commands

3. Find lines matching a pattern and extracting these into another file

4. List all the files and directories of the directory /usr/lib on the terminal . Now put the same information in a file named result. Display the contents of the file result now.

5. Change the permissions of the file DOS.txt give read and write permissions to user and group

6. Copy the file /etc/passwd into your home directory.

7. List the usernames and home directory from /etc/passwd in sorted order

8. Display the number of words in ***file.txt*** (Note: Number of lines , characters etc., should not be printed, only number of words)

9. Create a file abc.txt and change the ownership of this file to some other user on your machine, and also change the group to any name.

**Shell programming (10 marks)**

1. Write a Shell program to generate the directory structure as shown.

2. Write a Shell program to generate prime numbers between 1 and 50.

3. Write a shell script that displays a list of all files in the current directory to which the user has read, write and execute permissions.

4. Write a shell script to obtain two numbers from the user :

i. Swap the two numbers and print the swapped results

ii. Display the quotient and reminder of the swapped numbers being divided with each other.

5. Write a shell script that accept a file name starting and ending line numbers as arguments and display all the lines between given line no:

Use: $sed

6. Write a shell script that determines the period for which a specified user is working on the system.

7. Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it.

8. Write a shell script that accepts a list of file names as its arguments, counts and reports the occurrence of each word that is present in the first argument file on other argument files.