Sri Sai Vidya Vikas Shikshana Samithi ®
SAI VIDYA INSTITUTE OF TECHNOLOGY
Approved by AICTE, New Delhi, affiliated to VTU, Recognized by Govt. of Karnataka
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MODULE 1

1. Explain salient features of the Unix Operating System What are different types of files in a unix os? Explain briefly. **July/Aug 2022, Jan/Feb 2021**
2. Explain basic file types in Unix Explain briefly about absolute & relative pathname. **Jan/Feb 2021, Jan/Feb 2023**
3. Difference between Internal & External commands. July/Aug 2022, **Jan/Feb 2021, Jan/Feb 2023**
4. What is Parent child relationship? With the help of neat diagram, explain Unix File System **Jan/Feb 2021, Jan/Feb 2023**
5. Define Shell Script. Write menu driven shell script which displays- **June/ July 2023**
   i. Current user of system
   ii. List of files
   iii. Today's date
   iv. Contents of file
6. Explain the following commands. **June/ July 2023**
   i. printf
   ii. who
   iii. date
   iv cat
   v. od
7. Write the output for the following commands. **Jan/ Feb 2023**

   i. cal 10 2021 **ii.** date + "%D%T" **iii.** type echo **iv.** passwd **v.** who

8. Explain any 5 file related commands with an example. **Jan/ Feb 2021**

MODULE 2

1. Interpret the significance of ls -l command redirection. **July/Aug 2022, Jan/Feb 2021, Jan/Feb 2023, Feb/March 2022.**
2. Explain for and while control system in shell script with example. **July/Aug 2022**
3. Explain the Looping statements with syntax. **Jan/Feb 2023**
4. With the help of an example, explain grep command with its option. **Jan/Feb 2021**, **July/Aug 2022, Jan/Feb 2023, June/July 2023**
5. File current permission are rw-r-xr-- specify chmod expression required to change for the following using both relative and absolute method. **Jan/Feb 2021**

   i. rwxrwxrwx

   ii. r--r-----

   iii. ---------

   iv. ---r--r--

   v. -----x-w-

6. What is the output for the following: **Jan/Feb 2021, Jan/Feb 2023**

   i. ls[ijk]*doc

   ii. [A-Z]????*

   iii. *.[!s][!h]

   iv. *[!0-9]

   v. cp????progs

   vi. rm chap*

   vii. mv *[!C][!P][!P]

   viii. cat *.txt | wc-c

   ix. cp chap\[0-1\]

7. What is Shell. Briefly explain shell interpretive cycle. **Jan/Feb 2021, July/Aug 2022**
8. Explain three standard file and redirection in unix. **July/Aug 2022, Jan/Feb 2021, June/July 2023.**
9. Write the output of the following commands: **Jan/Feb 2023**

   i. grep “Anil” std ls || echo “ pattern not found”

   ii. test $x -gt $y

   iii. [-z $stg]

   iv. [-r $file]

   v. [! -n $stg]

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MODULE 3

1. Differentiate between Hard link & symbolic link. Explain the following API Open, read , write, create, lseek, fcntl. **July/Aug 2022, Jan/Feb 2023**
2. Describe the Memory Layout of C program with a neat diagram and explain Memory Allocation API's with their prototype. **July/Aug 2022, Jan/Feb 2021, Jan/Feb 2023**
3. Explain getrlimit() and setrlimit() functions with an example C program. **July/Aug 2022, Jan/Feb 2021**
4. Discuss how C program is started and terminated in various ways along with suitable diagram. **June/July 2023**
5. Write C program using setjmp and longjmp to show there effects on various variables. **Feb/March 2022,**
6. Explain exec function with program. **Feb/March 2022**
7. Explain setuid and setgid functions with example and expalin various ways to change user ids. **June/July 2023, Jan/Feb 2021.**
8. Explain setjmp and longjmp functions with example. **Jan/Feb 2023**

MODULE 4

1. What is FIFO? Explain Client-Server communication using FIFO. **July/Aug 2022**

2. Explain and differentiate between fork and vfork system call with an example C program. **July/Aug 2022**

3. What are pipes, Write a program to send data from parent to child using pipe API and also list its limitations. **July/Aug 2022, Jan/Feb 2023, June/July 2023**

4. Define semaphores and explain how the IPC is implemented using various semaphores API. **Jan/Feb 2022, Jan/Feb 2023**

5. What is FIFO? Explain Client-Server communication using FIFO. **July/Aug 2022, Jan/Feb 2021,**

6. Explain wait() and waitpid() API with their prototype. Mention the difference between wait and waitpid API. **June/July 2023**

7. Explain popen and pclose function with example.

8. Explain the implementation of shared memory IPC mechanism with all its API and their prototypes. **Jan/Feb 2023**

9. Define Message Queue. Discuss how it is useful in IPC. **Feb/March 2022**

MODULE 5

1. Discuss how error logging is done by daemon process with suitable example. **Feb/ March 2022, June/ July 2023**

2. Discuss the working of sigprocmask API. Explain all parameters of API with Progra. **Feb/ March 2022**

3. What is Daemon Process? Explain codeing rules and error logging. **Feb/ March 2022**

4. Explain the prototype of following APIs: **Feb/ March 2022**

- **i.** Signal **ii.** Kill **iii.** alarm **iv.** sigaction.

5. Explain how kill API is used for sending a signal to a process and explain the implementation of sleep API using alarm API. **Jan/Feb 2023**

6. Explain kill and alarm API. **July/Aug 2022**

7. Define signal. Explain Sigaction API with demonstrating program. **July/Aug 2022**

8. Explain sigsetjmp and siglongjmp API functions with an example. **Jan/Feb 2021**

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