Semester: V	Department of ISE & CSE(AI)	AY: 2026-27
Course Code: BCS515C	Course Name: UNIX System Programming	

Question Bank

Q.	Module-01	M	L	C
1.	Explain the kernel and shell relationship in UNIX operating system with a neat diagram.	10	L1	CO1
2.	Explain the following UNIX commands with syntax and examples: (i)who, (ii) ls, (iii)passwd, (iv)echo, (v)date	10	L2	CO1
3.	Explain any five file related commands with syntax and examples of each.	10	L2	CO1
4.	Explain the salient features of UNIX operating system.	6	L1	CO1
5.	Explain the file types or categories.	6	L2	CO1
6.	Differentiate internal and external commands in UNIX with suitable examples.	6	L2	CO1
7.	Consider the following set of commands: mkdir scheme cd scheme mkdir 2002/Branch 2006/Branch cd 2002/Branch mkdir CSE ISE ME cd ../../2006/Branch mkdir CSE ISE ME cd../../2002/Branch/ISE pwd cd../../2006/Branch/CSE pwd i) Demonstrate tree structure for the above commands, showing the hierarchy of directories. ii) What is the output of above commands assuming PWD:/home/vtu	10	L2	CO1

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8.	Outline the differences between absolute and relative path names with suitable examples.	10	L2	CO1
9.	Describe the command structure in Unix with examples.	6	L2	CO1
10.	Explain the usage of directory commands like pwd, cd, mkdir and rmdir	8	L2	CO1
	Module-02			
11.	Explain the use of chmod command to change file permission using both absolute and relative methods.	10	L2	CO2
12.	Explain ls commands with all options and examples	10	L2	CO2
13.	Explain grep commands with all its options.	10	L2	CO2
14.	Explain three standard files in UNIX.	6	L2	CO2
15.	Explain the steps of shell interpretive cycle.	6	L2	CO2
16.	Which commands is used for listing of file attributes? Explain the significance of each field.	10	L2	CO2
17.	Explain wild cards with examples and its various types.	6	L2	CO2
18.	Define Shell Programming. Develop a shell program to create a simple calculator which can perform basic arithmetic operations.	10	L3	CO2
19.	Write general syntax of “while” statement. Develop a shell program to read file that is created by another program and the program waits until the file is created.	8	L2	CO2
20.	What are regular expressions? Differentiate between basic and extended regular expressions with examples.	8	L2	CO2
	Module-03			
21.	Explain POSIX and SUS (Single UNIX Specification) standards.	6	L2	CO3
22.	Develop a C program to demonstrate the use of open() and read() system call in UNIX	10	L3	CO3
23.	Explain the use of mkdir() and rmdir() function in managing directories.	6	L2	CO3
24.	Differentiate between character special files and block special files.	6	L2	CO3
25.	Develop a C Program to demonstrate the chdir() and fchdir() functions in UNIX	10	L3	CO3
26.	Explain the memory layout of a C program in UNIX with neat diagram.	10	L2	CO3
27.	Explain the general syntax of following functions associated with file I/O: (i)open, (ii)read	10	L2	CO3
28.	Explain the general syntax of following functions associated with files and directories: (i) chdir, (ii)fchdir, (iii)getcwd	10	L2	CO3
29.	Demonstrate the use of ‘setjmp’ and ‘longjmp’ functions along with their prototypes.	10	L2	CO3

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30.	Explain the usage of open, create, read, write and close functions in the file handling.	10	L2	CO3

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