EPCET LIBRARY BANGALORE-49

CBCS SCHEME

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BCS515C

Fifth Semester B.E./B.Tech. Degree Examination, June/July 2026
UNIX System Programming

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Explain any three Internal and External Commands in UNIX with examples in each type.	8	L2	CO1
	b.	Explain the salient features of UNIX operating system.	7	L2	CO1
	c.	Explain the different basic file types in UNIX.	5	L2	CO1
		OR			
Q.2	a.	With a neat diagram, explain the architecture of UNIX.	8	L2	CO1
	b.	Explain the Parent-Child relationship in UNIX file system.	7	L2	CO1
	c.	Explain the concept of absolute pathname and relative pathname.	5	L2	CO1
		Module – 2			
Q.3	a.	Explain the different ways of changing file permission in UNIX.	10	L2	CO2
	b.	Which command is used for listing file attributes? Explain briefly the significance of each field of the output.	6	L2	CO2
	c.	Compare ordinary variables with environment variables with environment variables.	4	L2	CO2
		OR			
Q.4	a.	Outline the three standard files supported by UNIX. Also explain the redirection operators in UNIX.	10	L2	CO2
	b.	Explain with examples, set and shift commands in UNIX to manipulate positional parameters.	6	L2	CO2
	c.	Explain grep command with suitable examples.	4	L2	CO2
		Module – 3			
Q.5	a.	With a neat sketch, explain the memory layout of a C program.	10	L2	CO3
	b.	Explain the following general file API's : (i) open Function (ii) read Function (iii) create Function (iv) close Function	10	L2	CO3

		OR			
Q.6	**a.**	Explain chdir, fchdir and getcwd functions.	**10**	**L2**	**CO3**
	b.	Draw and explain the summary of starting and termination of a C program.	**10**	**L2**	**CO3**
		Module – 4			
Q.7	**a.**	Explain client-server communication using FIFO with a neat diagram.	**10**	**L2**	**CO4**
	b.	Explain Popen and Pclose functions with prototype.	**10**	**L2**	**CO4**
		OR			
Q.8	**a.**	Explain about stream-based pipes.	**10**	**L2**	**CO4**
	b.	Explain the fork and vfork system calls. How fork system call differs from Vfork. Write a program to demonstrate fork and vfork system calls.	**10**	**L2**	**CO4**
		Module – 5			
Q.9	**a.**	Explain with neat diagram the error logging facility for daemon process.	**10**	**L2**	**CO5**
	b.	Explain any five signals.	**10**	**L2**	**CO5**
		OR			
Q.10	**a.**	Explain the basic coding rules for daemon process.	**10**	**L2**	**CO5**
	b.	Explain the use of sigsetjmp and siglongjmp.	**10**	**L2**	**CO5**

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