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III/IV B.Tech (Regular\Supplementary) DEGREE EXAMINATION

Information Technology November, 2019 **Fifth Semester**

UNIX Programming Maximum: 60 Marks **Time:** Three Hours Answer Question No.1 compulsorily. (1X12 = 12 Marks)Answer ONE question from each unit. (4X12=48 Marks) Answer all questions (1X12=12)Marks) Difference between kernel and shell. Difference between single user and multiuser system. b) Write the uses of sed command. c) d) Shell variable. What does *expr* do in shell script? e) What is a background process in UNIX? f) Process group. g) Difference between system call and command. h) i) Difference between program and process. Socket. i) Write the syntax to create a pipe. k) Write the syntax to create a shared memory segment. 1) UNIT I With a neat diagram, explain the architecture of UNIX operating system 6M 2. a) With a neat diagram, explain the process life cycle. b) 6M Write the use of sed editor. Illustrate matching characters in regular expression with examples. 6M 3. a) Write the use of awk. Illustrate different functions in awk with examples. b) 6M UNIT II Illustrate decision making and loop control statements in Shell. 4. 6M a) List out the common environment variables that control the user environment in Shell. b) 6M (OR) Illustrate with examples the mechanisms for string handling and command line arguments in 6M 5. a) Shell environment. Write positional parameters in UNIX along with examples b) 6M 6. Explain the syntax and each argument of the following system calls: 12 (ii) open () iii) lseek () (i) create () iv. stat () v. dup() vi. fcntl() M (OR) Illustrate the difference between fork() and exec() with examples programs. 6M 7. a) b) What happens to the child process when the parent process kills/dies first? Explain with example. 6M **UNIT IV** 8. a) Describe in detail about the signals. 6M Illustrate the role of kill and raise functions in signal generation. b) 6M Write the advantage of pipes in UNIX. Write a simple program to demonstrate IPC mechanism 9. a) 6M between child and parent process. Explain in detail IPC using semaphores with an example. 6M



IINIX Programming SET I

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									cture of UNIX operating system. sagement commands in UNIX. (OR)	(6M) (6M)
3.									ching characters in regular expression with examples. unctions in awk with examples.	(6M) (6M)
	\ •								UNIT – II	(62.5)
4.									ol statements in Shell. les that control the user environment in Shell. (OR)	(6M) (6M)
5.	S	Shell e	nviro	nment.					for string handling and command line arguments in ng with examples. UNIT – III	(6M)
6.									ne following system calls: ttat() v. dup() vi. fcntl() (OR)	(12M)
7.	_							~>	nd exec() with examples programs. the parent process kills/dies first? Explain with example.	(6M) . (6M)

8. a) Describe in detail about the unreliable signals.b) Illustrate the role of kill and raise functions in signal generation. (OR)

UNIT – IV

9. a) Write the advantage of pipes in UNIX. Write a simple program to demonstrate IPC mechanism between child and parent process.
(6M)
b) Explain in detail IPC using semaphores with an example.
(6M)