## BT-6/J-22

46173

## UNIX AND LINUX PROGRAMMING PE-CS-S314A

Time: Three Hours]

[Maximum Marks: 75

Note: Attempt Five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

## Unit I

- 1. (a) What is Kernel? Discuss in detail various functions performed by the Kernel.
  - (b) What is Shell? Explain various types of shell in Linux.
- 2. (a) What is Logging in and Logging Out process in Unix operating system? Explain in detail.
  - (b) Explain the Multiprogramming and Multiprocessing time-sharing client-server model of Unix operating system.

## Unit II

3. (a) How is grep utility tool used to find a pattern in a given datastream?

	(b)	Comparison between a wild-card and a regular
		expression. Also tell about sed. 7
4.	(a)	Write an AWK program to list the number of
		processes run by the users.
	(b)	Develop a PERL based program that reads a file as
		argument, checks whether the file exists and prints
		if the file is binary.
		Unit III
5.	(a)	What is Debugging? How is gdb tools used to find-
		the errors in C programs?
	(b)	What is gcc compiler? What are the various options
		used in gcc compilation?
6.	(a)	What is the role of Makefile utility in Unix
		environment? Explain with an example. 8
	(b)	What do you mean by static and dynamic libraries
		for C language ? What is dynamic loader? 7
Unit IV		
7.	(a)	What is booting process? How the finger process
		provides the details of all users currently logged
		into the Unix system ?
	(b)	How is the security provided by the Firewalls in
		Unix environment? Explain in detail. 7

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- 8. (a) What do you mean by authorization? How does it check the authentication of right users logging into the Linux system?
  - (b) What is the importance of a password while creatinga new user account in the Unix systems.

