

# 2002 SCHEME

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CS55

## Fifth Semester B.E. Degree Examination, December 2010 UNIX and Shell Programming

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. Discuss the salient features of the UNIX operating system. (08 Marks)  
b. What are system calls? Give two examples of system calls in UNIX OS. (04 Marks)  
c. Describe the relationship between the kernel, shell and the user, with the help of a diagram. (08 Marks)
- 2 a. Explain the following commands:  
i) bc      ii) od      iii) comm      iv) stty (08 Marks)  
b. Discuss the various approaches of setting file permissions in UNIX. (06 Marks)  
c. Differentiate between hard links and soft links to files, with examples. (06 Marks)
- 3 a. With a suitable sketch, explain the modes of operation of the vi editor. (10 Marks)  
b. Explain the commands "search for pattern" and "search and replace" in vi editor. (06 Marks)  
c. What is command substitution in UNIX? Give one example. (04 Marks)
- 4 a. What is the application of the following files? Explain.  
i) |dev| null      ii) |dev| tty (04 Marks)  
b. Discuss the various commands for job control in UNIX, with examples. (10 Marks)  
c. Explain how the shell process is created. (06 Marks)
- 5 a. Discuss the following commands as related to communication in UNIX:  
i) mesg      ii) wall      iii) talk (06 Marks)  
b. List and explain the environment variables in UNIX. (10 Marks)  
c. Write a note on pr command. (04 Marks)
- 6 a. Discuss sort command, with any five options. (06 Marks)  
b. Describe with examples, how test and [ ] are used to evaluate expressions in shell programming. (08 Marks)  
c. What is the significance of set command in shell programming? Explain. (06 Marks)
- 7 a. State the built-in variables used in awk and explain each one of them. (07 Marks)  
b. Write a Perl program that prompts a user to input a string and a number and prints the string that many times, with each string on a separate line. (06 Marks)  
c. Discuss the string handling functions in Perl, with examples. (07 Marks)
- 8 a. Write a note on 'tar' command and its options. (06 Marks)  
b. Mention the various privileges of the super user and explain them. (08 Marks)  
c. What is the significance of mounting and unmounting files in UNIX? Explain. (06 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

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