

**322555(22)**

**B. E. (Fifth Semester) Examination, April-May/  
Nov.-Dec. 2020**

**(New Scheme)**

**(CSE Branch)**

**UNIX & SHELL PROGRAMMING**

***Time Allowed : Three hours***

***Maximum Marks : 80***

***Minimum Pass Marks : 28***

***Note : Part (a) is compulsory of 2 marks. Attempt any two from parts from (b), (c) and (d) is of 7 marks.***

**Unit-I**

1. (a) Write a brief note on the features of Unix operating system. 2
- (b) Explain the architecture of Unix operating system. 7

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- (c) Explain the following Unix commands : 7
- (i) cp
  - (ii) ls
  - (iii) mv
  - (iv) cat
  - (v) script
  - (vi) tee
  - (vii) cmp
- (d) Write short notes on : (any two) 7
- (i) Vi-editor & its modes
  - (ii) Security levels in Unix
  - (iii) Changing permission (chmod)

### Unit-II

2. (a) What is Shell? List the names of standard shells used in Unix today. 2
- (b) Write notes on : (any two) 7
- (i) Redirection
  - (ii) Predefined variables
  - (iii) Sorting
  - (iv) Translating characters

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- (c) What do you mean by the term metacharacter? Explain in detail the use of "Quotes" in Unix. 7
- (d) What is Filter? Explain in detail the commands used for displaying the beginning and end of a file. Also describe the command used to count the characters, words, or lines in a document. 7

### Unit-III

3. (a) List the names of three utilities in the grep family. 2
- (b) Describe the grep command in detail. Also explain its operations with examples. 7
- (c) What is Sed? Explain the commands used in sed. 7
- (d) What is the format of the awk command? How many types of patterns are defined for awk? 7

### Unit-IV

4. (a) Name two special files of UNIX that can be used by any shell. 2
- (b) Explain various Korn shell features. 7

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- (c) How Korn shell implements multiway selection? Write a Korn shell script to print the spelling of a digit between 0-9 using case statement. 7
- (d) Write short notes on : (any **two**) 7
- (i) Command Execution Process
  - (ii) Eval Command
  - (iii) Repetition in Korn Shell

#### Unit-V

5. (a) Define Inodes. 2
- (b) Write an algorithm for conversion of a path name to an Inode. 7
- (c) Explain various decision making statements used in C-shell with suitable example. 7
- (d) Write short notes on : (any **two**) 7
- (i) Environmental variables in C-shell
  - (ii) For each loop in C-shell (with example)
  - (iii) System call-lseek