



**SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR**  
(Autonomous)

Siddharth Nagar, Narayanavanam Road – 517583

**QUESTION BANK (DESCRIPTIVE)**

**Subject with Code : LINUX PROGRAMMING(17IT608)**

**Course & Branch: B.Tech - CSIT**

**Year & Sem: III-B.Tech & II-Sem**

**Regulation: R16**

**UNIT –I**

1. (a) Describe in detail about the structure of LINUX. 5M  
(b) What are the features of Linux operating system 5M
2. What information is presented when the following commands are entered? 5\*2=10M  
(a) date (b) who (c) passwd (d) bc (e) script
3. (a) Define vi Editor and explain its modes. 5M  
(b) Brief about the commands used in the vi Editor. 5M
4. What are the file types available in Linux? Discuss file operators with suitable examples. 10M
5. (a) Explain the security levels provided in Linux environment. How to change permissions of a file? 6M  
(b) Brief umask command. 4M
6. What is user and group in Linux? Explain the related commands for changing ownership and group. 10M
7. Write about the operations unique to directories alone. 10M
8. Write about the operations that can be performed on both directories and file. 10M
9. What is meant by path and pathname in Linux? Explain them in detail. 10M
10. a) Distinguish between time – sharing and client/server environment. 2M  
b) Name the two categories of regular files. Does Linux recognize the difference between these two categories? Explain your answer. 2M  
c) Write syntax for changing ownership and group name on a given file/s 2M  
d) Discuss about various modes of vi editor. 2M  
e) Write the command for the following 2M

To display time in format hour:minute:second

**UNIT 2**

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|--|---------|
| 1. a) In how many ways a command can be executed?  | 6M      |
| b) write a shell script to count number of lines present in a text file  | 4M      |
| 2. What is redirection? Explain it in detail.  | 10M     |
| 3. (a) How quotes are used in Linux, explain with example.   | 5M      |
| (b) Brief about command line editing.  | 5M      |
| 4. Explain in detail foreground and background jobs. Give example.   | 10M     |
| 5. (a) Explain concatenate command with its options.   | 5M      |
| (b) Explain sort command with its options.   | 5M      |
| 6. What command is used for translating characters? Also explain its options with examples.  | 10M     |
| 7. What is a filter? Illustrate all filters with appropriate examples  | 10M     |
| 8. What information is presented when the following commands are entered?  | 5*2=10M |
| (a) cmp      (b) diff      (c) comm      (d) cut      (e) paste  |         |
| 9. Write a shell program for counting characters, words and line?  | 10M     |
| 10. Explain (a) Aliases (b) Linux session  | 5+5=10M |
| 10. a) Define pipes.   | 2M      |
| b) Explain tee command.  | 2M      |
| c) Compare and contrast the <b>cmp</b> command with the <b>comm</b> Command  | 2M      |
| d) If your login shell is korn shell, can you create another korn shell as the child shell? What file descriptor designates the standard input stream, standard output stream and the standard error stream? | 2M      |
| e) What does "tail" command do.  | 2M      |

**UNIT 3**

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|---|---------|
| 1. Differentiate atoms and operators in detail  | 12M     |
| 2.a) What is grep? How is it useful?  | 2M      |
| b) Illustrate grep command functionality with following options<br>(-c, -i, -n, -s, -v, -x, -f)         | 10M     |
| 3. Describe “Dot, class, anchor, back reference and single character” atoms                             | 10M     |
| 4. Differentiate among grep, egrep and fgrep  | 12M     |
| 5. a) How does an “eval” command work?  | 4M      |
| b) Define Environmental variable? Explain about Environmental variables used<br>in korn shell           | 8M      |
| 6. How do you use a variable in korn shell? Describe different types of variables<br>used in korn shell | 10M     |
| 7.a) How do you check exit status of a command?   | 2M      |
| b) Illustrate decision making statements used in korn shell   | 10M     |
| 8. What is an expression? Describe about different expression forms used in korn shell                  | 10M     |
| 9.a) How do for-in and until loops work in korn shell?  | 4M      |
| b) What are the special parameters and variables used in korn shell?                                    | 8M      |
| 10. What would be the effect of the following commands:   | 5*2=10M |
| (a) <code>grep “^[A - Z]” file1</code>  |         |
| (b) <code>egrep “LINUX Linux linux” file1</code>  |         |
| (c) <code>grep “Linux\$” file1</code>   |         |
| (d) <code>grep “^Linux\$” file1</code>  |         |
| (e) <code>grep ^...\$ file1</code>  |         |

**UNIT 4**

1. Narrate how variable evaluation and substitution is done in korn shell with examples 12M
2. a) What is here document operator? write a shell script using it 6M  
b) Define function. Describe How do you use functions in korn shell 6M
3. Narrate all built-in commands in korn shell With the help of shell prompt 12M
4. Write a shell script which simulate calculator 12M
5. a) What are the system variables used by “awk” 6M  
b) Describe 3 data processing concepts used in “awk” 6M
6. a) Illustrate “awk” process flow 5M  
b) calculate student average using “awk” script 7M
7. Define Associative array? Explain it with example “awk” scripts. 12M
8. Write about following string handling functions  
Length, index, substring, split, substitution, match and toupper, tolower 8M
9. Write an awk script to merge contents in two files. 4M
10. Narrate all “awk” statements in detail With example scripts . 12M

**UNIT-5**

- 1.a)Write awk script to display only names and phone numbers from given file. 6M  
b) Write awk script to count number of lines and words in a file. 6M
- 2.How do you find a line that matches a regular expression using awk 4M
- 3.What is remote access?Describe about few communication utilities. 10M
- 4.a)Explain how talk and write commands work? 6M  
b)How does “telnet” command work?explain it with example . 6M
- 5.Describe in detail about domain levels used with “mail” utility. 8M
- 6.Narrate about commands used to send a mail in Linux environment. 12M
- 7.Write in detail about telnet interface commands. 7M
8. Narrate about commands used to read a mail in Linux environment. 12M
9. What is ftp? Illustrate how files can be transferred between two systems with  
Appropriate commands. 12M
- 10.Illustrate features of awk in detail with appropriate examples 12M