**K.S.Institute of Technology**

**Department of Computer Science and Engineering**

**SUB/ SUB CODE: USP/15CS35**

**First Assignment Questions**

1. **Explain the salient features of Unix OS. (6 Marks)** 
   * (Explain briefly the features like multiuser, multitasking, pattern matching, programming facility, Documentation, Unix toolkit, portable, Networking, Organized file system, device independence, utilities, Services)
2. **Explain echo, ls, who and date commands with examples. (4 Marks)**
   * (Explain briefly each command with \*what it does? \*what are the options if any? \*What are the arguments if any? Give one example like what is the output of the command, for e.g echo Hello outputs Hello)
3. **Explain briefly the different sections of man page. (4 Marks)**
   * (Explain briefly the 8 sections viz. NAME, SYNOPSIS, DESCRIPTION, OPTIONS, OPERANDS, USAGE, EXIT STATUS, SEE ALSO)
4. **Explain how to display and set the terminal characteristics of a UNIX OS. (6 Marks)**
   * (Command stty displays and sets the Unix terminal characteristics. **stty** at command prompts prints the terminal line setting with keyword=value **or keyword or –keyword**, **stty -a** prints all current settings with **keyword=value or keyword or –keyword** in human readable form. To change the settings use stty keyword or stty –keyword or stty keyword=value. E.g stty intr \^c will change interrupt key from the default)
5. **Explain the different modes of vi editor. (4 Marks)**
   * (Explain briefly the 3 modes viz. command mode, input mode and last line mode. Can explain with a simple diagram)
6. **Explain how the text is entered and replaced in input mode of vi editor. (6 Marks)**
   * (Explain or show the table of all i/p mode commands with their functions. Note : Commands are i, a, I, i, o, O, rch, R, s, S)
7. **Discuss the navigation commands in vi editor with example. (6 Marks)**
   * (Text cursor movements: commands h, j, k, l for 4 **direction** movements, commands b, e and w for **word** navigation, commands 0, |, $ to move cursor to **line extremes**, Commands ctrl-f, ctrl-b, ctrl-d and ctrl-u to **scroll the text window**, command G for absolute movement)
8. **Explain the Shell’s interpretive cycle. (4 Marks)**
   * (5 Steps. Wait for command, recreate a simplified command line, pass command line to kernel, wait for command to complete, prompt reappears after command execution is complete)
9. **Explain with examples the wild-card characters of Unix Shell. (6 Marks)**
   * **(Unix Shell wild cards- primary 🡪\*, ?, [], secondary🡪 , !, {})**
10. **Explain with examples the text editing commands in vi editor. (4 Marks)**
    * (Commands for Deleting text🡪x, dd, moving text🡪p, p, copying text🡪yy, nyy Joining Lines🡪J)
11. **Explain with examples the shell internal command and external command, the type command, man –k command, man –f command. (5 Marks)**
    * (Internal command:- built-in commands to shell, external commands are separate executable file present in /bin directory, the type command – is a built-in command, is used to locate internal and external command. Man –k is used in place of apropos command; it searches manual page names and descriptions. Man –f is used in place of whatis command; it displays one-line manual page descriptions)
12. **Explain Single Unix Specification. (5 Marks)**
    * (Important points: sus, the purpose of sus, the different specifications prior to sus and maintenance of the standards, Motivated to have sus, advantage of following sus disadvantages of not following sus. Advantages of APIs following sus and disadvantages of APIs not following sus)
13. **Explain the command structure. (4 Marks)**
    * **(Command Structure🡪<command > [options] [arguments], command definition, purpose of options, symbols(- or +) used along with options and what they signify, purpose of arguments and different types of arguments (like filenames, parameters))**
14. **Explain set, ab, and map commands. (6 marks)**
    * (All commands are used to customize vi editor environment permanent or for only one session. ab is used for abbreviations, map is used to map keyboard keys, set is used to customize the editor to display line numbers, tab width, indent and so on**)**
15. **Explain with example in vi editor how to search for a pattern, repeat the last pattern search and how substitution can be achieved. (6 Marks)**
    * (To search a pattern: use / and ?, to repeat the last pattern use n or N, to substitute🡪 :address/source\_pattern/target\_pattern/flags)