Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **14CS2044** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INTRODUCTION TO SYSTEM ADMINISTRATION** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Illustrate the different channels supported by Linux with suitable example and diagram. Also, show that how to perform AND, OR, pipe and tee operations using commands. | CO1 | 10 |
| b. | Describe the significance of X window system when developing open source desktop environments. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Write the correct Linux command to perform the following operations and predict the output for the commands given.   * create your own alias for the command mv. * output of command echo “\\*\\*\\* hello \\*\\*\\*” * delete the directory named “myproject” which contains 10 files. * Use “cat” command is used to create, view and append a file. * Effects of executing the commands su and su - * add write and execute privilege to the group users on file1 * remove the read privilege of other users on file3 * change the group users as libvirt on file5 * change the owner and group of file7 to toe:blockchain * delete all file with \*.jpg extension | CO2 | 10 |
| b. | Identify the correct commands to perform the following operations   * Search the text “apple” from the file fruits.txt using grep * Count the number of files exists in a directory *“/srv/ftp/”*and count the number of words in the file /etc/profile. * command to split the editor window in horizontal, vertical and switch between windows. * display the relationship between processes * kill a process with PID 3214. | CO2 | 10 |
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| 3. | a. | Define the following   * Process * Kernel’s role in process management * Multitasking * fork * process states | CO1 | 10 |
| b. | Discuss the application of the following   * Shared libraries * Paged memory * Tracking memory usage * Viewing virtual memory information | CO2 | 10 |
| **(OR)** | | | | |
| 4. | a. | Illustrate the use of the following commands with its options   * wget * rsync | CO2 | 10 |
| b. | Server1 has secondary 1 TB hard disk. Using fdisk create 5 partitions. Assign file systems to it and explain the process of making an entry in fstab to perform an auto mount. | CO2 | 10 |
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| 5. | a. | Illustrate the day today application cron job in system administrator’s life with some real time examples and diagram. | CO1 | 10 |
| b. | Distinguish ‘at command’ from ‘batch command’ with necessary examples. | CO1 | 10 |
| **(OR)** | | | | |
| 6. | a. | What do you know about the automated installation process? How to create a kickstart file to perform it? | CO3 | 10 |
| b. | Illustrate the init script configuration. | CO2 | 10 |
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| 7. | a. | Discuss useradd, usermod, userdel, groupadd, groupdel using correct examples. | CO1 | 10 |
| b. | Illustrate the package life cycle management using rpm commands along with appropriate examples. | CO2 | 10 |
| **(OR)** | | | | |
| 8. | a. | Describe the linux boot process. | CO1 | 10 |
| b. | Write the appropriate commands to perform the following operations and explain each command   * set the ip address 192.168.64.10/24 * set the gateway and dns server address 192.168.64.1 * forward all the outgoing packets to 192.168.64.1 * show all the links * down the link eth2 and enable it | CO3 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Write a shell script to check the utilization of / srv partition at specific intervals every day and store the results in a single file. | CO3 | 10 |
| b. | Illustrate the security issues in detail. | CO3 | 10 |