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



**End Semester Examination – Nov/Dec– 2017**

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| **Code :** | **17CS3025** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SYSTEM ADMINISTRATION** | **Max. marks :** | **100** |

**ANSWER ALL THE QUESTIONS**

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| **Q. No.** | **Sub**  **Div** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Illustrate the use of following commands i. *tar, cpio, gzip, bzip2. ii. hard link and soft link* | CO3 | 10 |
|  | b. | Perform the following operations   1. Search the text “India” from the file great\_nations using *grep* 2. Write the *ls* command with regular expression to list all the files starting with “d(or)D emo: and ending with a range 0-9. 3. Count the number of files exists in a directory /etc using a command and count the number of words in the file /etc/profile. 4. Give the command to split the editor window in horizontal, vertical and switch between windows. 5. display the relationship between processes 6. kill a process with PID 3214. 7. *renice* the nice value of a process 2117 to 0. Give your justification, Is it possible to renice to 0 or not?. 8. command to view the disk utilization of the partition /data 9. start the *xeyes* application in the background 10. bring the background running application with pid 2345 to the foreground. | CO3 | 10 |
|  |  | (OR) |  |  |
| 2. | a. | Demonstrate the following using the required commands   1. Create a multi level directory /data/report/pdf/using single command. 2. Remove a directory which contains 5 files. 3. Copy only the content of the directory /project to /iprint 4. Create a soft link for the directory /iprint | CO3 | 5 |
|  | b. | vi editor supports various operations in the command mode. Write about minimum of 5 commands. | CO3 | 5 |
|  | c. | Illustrate the different channels supported by Linux with appropriate example and diagram. Also, show that how to perform *AND*, *OR*, *pipe* and *tee* operations using commands. | CO3 | 10 |
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| 3. | a. | Compare the difference among the following commands *tail, head, more, less, wc, cat, tac* and *rsync.* | CO3 | 10 |
|  | b. | Demonstrate how SSH server and client establishes the connection and its applications like remote connection, generate rsa key, copy id to the remote machine, remote command execution and remote copy. | CO2 | 10 |
|  |  | (OR) |  |  |
| 4. | a. | The purpose of a shell is to make it easy for users to run programs and work with files in Linux. Write about any five Linux shells, create 2 shell variables with number and text content, print it using echo command and list the purpose of environment variables. | CO2 | 10 |
|  | b. | Write the order of execution bashrc and profile in login and non login shell. | CO1 | 10 |
|  |  |  |  |  |
| 5. | a. | Show how the *zypper* command can be used to perform the following query, search, install, uninstall, update, add repo, remove repo and list the repo. | CO4 | 10 |
|  | b. | Illustrate the user create, delete modify, group create commands with the commonly used options. | CO5 | 10 |
|  |  | (OR) |  |  |
| 6. | a. | Control the network using wicked services (assume day to day operations and troubleshooting). | CO6 | 10 |
|  | b. | Evaluate the use of rsyslog for reducing the size of log files. | CO2 | 10 |
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| 7. | a. | Structure the relations between the hard disk and the file read write operations using btrfs. | CO1 | 10 |
|  | b. | In a production server 2 TB hard disk added for the storage. Create a partition of disk size 700GB using fdisk, create a file filesystem of type ext3 and mount it on the directory /report using fstab. | CO6 | 10 |
|  |  | (OR) |  |  |
| 8. | a. | Demonstrate the delegation of privileges using polkit framework. | CO5 | 10 |
|  | b. | Device a strategy to schedule one and recurring tasks automatically. | CO2 | 10 |
|  |  |  |  |  |
|  |  | **Compulsory** |  |  |
| 9. | a. | Describe the linux boot process. | CO1 | 10 |
|  | b. | Write about session manager, its configuration basics and structure. | CO1 | 10 |

ALL THE BEST