



**JARAMOGI OGINGA ODINGA UNIVERSITY
OF SCIENCE & TECHNOLOGY
UNIVERSITY EXAMINATIONS 2012/2013
2ND YEAR 2ND SEMESTER FOR DIPLOMA IN
LINUX FOR ENGINEERING AND IT APPLICATIONS
(KISUMU L.CENTRE)**

COURSE CODE: ICT 2122

TITLE: RHEL SERVER ADMINISTRATION

DATE: 13/8/13

TIME: 9:00 – 10.30 AM

DURATION: 1.30 HOURS

INSTRUCTIONS

- 1. This paper consists of TWO section**
- 2. Answer ALL Question in Section A (Compulsory) and ANY other 2 questions in Section B.**
- 3. Write your answers on the answer booklet provided.**

SECTION A

- 1. Which of the following is the URL for the Red Hat Web site that provides access to bug reports?**
 - A. bugs.redhat.com
 - B. bugzilla.redhat.com
 - C. status.redhat.com
 - D. www.redhat.com
- 2. Which of the following is true of open source software?**
 - A. You can access and read the source code.
 - B. You can charge a fee for providing the software.
 - C. You can modify and redistribute the source code.
 - D. You can run the binary code.
- 3. What is the maximum number of primary partitions that can be defined?**
 - A. 2
 - B. 4
 - C. 8
 - D. 12
- 4. Which of the following are systems for describing the location of data on a disk drive?**
 - A. Linear Block Addressing
 - B. Linear Byte Addressing
 - C. Logical Block Addressing
 - D. Logical Byte Addressing
- 5. Which of the following is the shell's input redirection operator?**
 - A. >
 - B. >>
 - C. <
 - D. <input
- 6. Which of the following commands prints the file /etc/hosts?**
 - A. lp /etc/hosts
 - B. lpd /etc/hosts
 - C. lpr /etc/hosts
 - D. lpq /etc/hosts
- 7. Which of the following protocols is an unreliable protocol?**
 - A. IP
 - B. ICMP
 - C. TCP
 - D. UDP
- 8. Which of the following commands starts the NFS service?**
 - A. cd /etc/rc.d/init.d; ./nfs go
 - B. cd /etc/rc.d/init.d; ./nfs start
 - C. service nfs go
 - D. service nfs start
- 9. The previous system administrator put useless messages at login, what file do you edit to change the system message?**
 - a) /etc/motd
 - b) /etc/str
 - c) /etc/strtmps
 - d) /etc/.conf
- 10. Users on your network cannot print to a Linux printer. You decide to restart the printer daemon, which command would achieve that?**
 - a) topq printer-name
 - b) enable printer-name
 - c) restart printer-name
 - d) up printer-name

11. Which file does Linux use to resolve hostnames?

- a) /etc/hostname.conf
- b) /etc/dns.conf
- c) /etc/host.conf
- d) /etc/resolve.conf

12. What is "tin"?

- a) Terminal Interpreter
- b) The command to change the time
- c) The command to compare text files
- d) A newsreader

13. What are the file attributes for executing Perl programs?

- a) 666
- b) 755
- c) 766
- d) 777

14. What is bash?

- a) Something you do to a watermelon
- b) A command to delete multiple files
- c) A network bit format
- d) A command shell

15. What is the DOS LPT1 port in Linux?

- a) /dev/lpt0
- b) /dev/lpt1
- c) /dev/lp0
- d) /dev/lp1
- e) DOSLPT1

16. What is the minimum memory requirements for XFree86?

- a) 640K
- b) 2MB
- c) 4MB
- d) 8MB
- e) 16MB

17. You attempt to remove a directory, but Linux won't allow you, what is the most likely problem?

- a) The directory name contains illegal characters
- b) You are not logged in as root
- c) The hard disk is full
- d) The directory is not empty
- e) None are likely problems

18. From a command prompt, what does the command "ls" do?

- a) Lists the settings of the OS
- b) Lists the contents of the directory
- c) List command to list contents of files
- d) Finnish words, means to direct a file to a port
- e) None of the Above

19. Which command creates a file system?

- a. fdisk
- b. crfs
- c. mkfs
- d. fs
- e.

20. What is the default administrator username?

- a. administrator
- b. admin
- c. superuser
- d. root
- e. head

21. Which of the following are valid Linux wildcards? (Choose all that apply)

- a. * and ?
- b. /
- c. ?
- d. &
- e. Z

- 22. What does the command "ps" do?**
- Prints the directory
 - Shows what processes are running
 - Print status of LPT1
 - Produces system statistics
 - None of the above
- 23. You are working in Linux when a program hits a flaw and stops running. Which command can be used to end the process?**
- kill
 - stop
 - end
 - wait
 - CTL-ALT-DEL
- 24. A user is logged into the Linux workstation, what is the best way to login to root from a shell prompt?**
- login root
 - chuser root
 - su
 - root
- 25. Linux allows filenames up to what number of characters?**
- 8
 - 11
 - 256
 - 512
 - Unlimited
- 26. T/F: The command "pwd" displays the directory**
- True
 - False
- 27. T/F: To move files, use the "move" command.**
- True
 - False
- 28. Protocols used for retrieval and deletion of mail are:**
- tcp and udp
 - smtp and imap4
 - imap4 and pop3
 - mail and pop3
- 29. Your workstation is on a LAN. You can successfully ping other hosts on the same network but are unable to ping a host outside your network. Which command(s) will help you diagnose the problem?**
- route
 - tracert
 - nettl
 - tracert
- 30. Your server has Red Hat 7.x installed. Your NIC has been detected but you have not configured networking. To allot it an IP address, you have to edit the following file:**
- This is impossible. An address has to be allotted the moment an NIC has been detected.
 - /etc/hosts
 - /etc/sysconfig/network
 - /etc/sysconfig/network-scripts/ifcfg-eth0

SECTION B

Question 1

a) Define/explain the following terms: (12 marks)

1. Copyleft
2. Development kernel
3. GNU Project
4. GPL
5. FSF
6. Kernel
7. OSS
8. Stable kernel
9. Linux Swap
10. Linux Native
11. Primary partition
12. Logical partition

b) The Red Hat Hardware Compatibility List classifies hardware devices into **four** categories state and explains. (8 marks)

Question: 2

Explain the following daemons: (20marks)

- | | |
|---------------|-----------------|
| 1. amd | 15. ftp |
| 2. apmd | 16. imap |
| 3. arpwatch | 17. netbios-ssn |
| 4. autofs | 18. pop-3 |
| 5. bootparamd | 19. shell |
| 6. dhcpcd | 20. systat |
| 7. diald | |
| 8. httpd | |
| 9. linuxconf | |
| 10. named | |
| 11. nfs | |
| 12. telnet | |
| 13. auth | |
| 14. bootps | |

Question :3

1. What dedicated text editor can you use from the graphical interface?(1mark)
2. What is the name of the RHEL 6 graphical file browser? (1mark)
3. Name three different types of help systems in Linux. (3marks)
4. What tool can you use to configure a system to synchronize its time with a Network Time Protocol Server? (1mark)
5. What tool can you use to configure a printer? (1mark)
6. Name three different Linux partition types that you can configure. (3marks)
7. Name a utility that can measure the current load on the CPU and RAM memory. (3marks)
8. What command or utility can be used to update the current software on the system? (1mark)
9. List the commands that you can use to copy, move, delete, and create files. (4marks)
10. Name two different commands associated with command manuals. (2marks)
11. Name two commands associated with testing network connectivity. (2marks)

Question :4

1. What file normally governs the configuration of the first Ethernet card on a system? (1mark)
2. What four files are associated with the configuration of users and groups? (4marks)
3. Based on the typical output from the `ls -l` command, such as the following, name the user and group owner, and describe the permissions given to the user owner, the group owner, and all other users: (4marks)

```
-rw-r---x. 1 jb123 am456 2395 Apr 23 23:11 def
```
4. Enter the secure shell command that would connect to user Osee's account on the remote system named testing in a way that supports access to remote graphical applications. (1mark)
5. What directory includes most of the scripts that control Linux services? Name three commands that you can use with most of those scripts. (4marks)
6. If you've configured a `/dev/sda5` partition as swap space, what command would you use to format it? What entry would work for that swap space in `/etc/fstab`? (2marks)
7. What is the GUI tool that can help manage virtual machines? (1mark)
8. What command can you use to create an encrypted password for GRUB?(1mark)
9. What command compresses the `/home` directory into an archive in bzip2 format, in a file named `homearch.tar.bz2`? (1mark)
10. Enter a command that lists all users who use bash as their default shells. (1mark)