



# BRAINWARE UNIVERSITY

Course – M.Sc.(HN)

Linux System Administration (MHN201)

(Semester – 2)

**Time allotted: 3 Hours**

**Full Marks : 70**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## Group –A

(Multiple Choice Type Question)

10 x 1 = 10

1. Choose the correct alternatives for the following: (Any ten)

- (i) Single user mode shell runs as
- |                |              |
|----------------|--------------|
| a) Admin user  | b) Root user |
| c) normal user | d) Log user  |
- (ii) Which command is used to display the operating system name?
- |           |          |
|-----------|----------|
| a) OS     | b) Unix  |
| c) kernel | d) uname |
- (iii) The process of starting up a computer is known as
- |                   |                |
|-------------------|----------------|
| a) Boot Loading   | b) Boot Record |
| c) Boot Strapping | d) Booting     |
- (iv) In Linux, initrd is a file
- Containing root file-system required during boot-up
  - Contains only scripts to be executed during boot-up
  - Contains root-file system and drivers required to be preloaded during boot-up
  - None of the above
- (v) \_\_\_\_ is a directory (which should exist), on which to mount the file system?
- |                |              |
|----------------|--------------|
| a) Root        | b) Boot      |
| c) Mount-point | d) Partition |
- (vi) Which file contains the filesystems to be automatically mounted during boot?
- |                 |               |
|-----------------|---------------|
| a) /etc/mount   | b) /etc/fstab |
| c) /etc/inittab | d) /etc/boot  |

- (vii) Which of the following default umask settings for regular files
- |        |                  |
|--------|------------------|
| a) 222 | b) 111           |
| c) 000 | d) None of these |
- (viii) The command `chmod 1777 a.out`
- Will set the suid bit of a.out
  - Will set the suid bit of a.out only if the command is issued by root
  - Is not a valid command
  - Will set the sticky bit of a.out
- (ix) Which command is used to display disk consumption of a specific directory?
- |       |        |
|-------|--------|
| a) du | b) ds  |
| c) dd | d) dds |
- (x) Which command creates an empty file if file does not exist?
- |        |          |
|--------|----------|
| a) cat | b) touch |
| c) ed  | d) read  |
- (xi) Which command changes a file's group owner?
- |           |          |
|-----------|----------|
| a) cgrp   | b) chgrp |
| c) change | d) group |

### Group – B

(Short Answer Type Question)

3 x 5 = 15

Answer any three questions of the following

- What is the significance of `/etc/inittab` file and what is the way to mount a file system permanently?
- Differentiate between the use of `chmod` and `chown` command with proper examples.
- Describe the utility of `gpasswd` command for both root user and normal user with proper examples.
- What is `quota.user` and `quota.group`? How will those be create?
- Describe the following paths: [ 2.5 x 2 = 5]
  - `/etc/gshadow`
  - `/etc/dhcp/dhcpd.conf`

**Group – C**

(Long Answer Type Question)

3 x 15 = 45

Answer any three questions of the following

7. (a) How do you change permission under Linux?  
 (b) How do you boot your system successfully on run level 3?  
 (c) Distinguish between RPM and YUM  
 (d) A block contains an IP address 205.16.37.39/24. What is the network address and broadcast address? [5+2+4+4=15]
8. (a) What does *edquota* and *quotacheck* do in Linux? Give proper example  
 (b) Define hard and soft space limits with example.  
 (c) Define grace period and what is the way to change it? [6+6+3=15]
9. (a) What is the significance of */etc/passwd* and */etc/shadow* files?  
 (b) Describe each and every field of */etc/fstab* file.  
 (c) What is the utility of *chage* command? [4+8+3=15]
10. (a) Differentiate GRUB and LILO.  
 (b) Differentiate user primary group and user secondary group.  
 (c) How do you recover root password?  
 (d) Describe each runlevels in detail. [3+3+5+4=15]
11. Write short notes on any *three* from the following: [3x5 = 15]  
 (a) Linux directory structure  
 (b) DHCP Server.  
 (c) File and Directory permission  
 (d) Linux booting process  
 (e) Monolithic Kernel VS Micro Kernel