



## BRAINWARE UNIVERSITY

Course – MSc. (HN)

**Advanced Linux Administration and Scripting (MHN303B)**

(Semester – 3)

**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 Questions)

10 x 1 = 10

1. *Choose the correct alternative from the following:*

(i) Command used to start any service from runlevel:

- |              |              |
|--------------|--------------|
| a. init      | b. chkconfig |
| c. setsebool | d. service   |

(ii) All zone related information stored in a DNS zone file which is belong to –

- |               |             |
|---------------|-------------|
| a. /var       | b. /var/log |
| c. /var/named | d. /etc     |

(iii) /etc/resolv.conf file is used to store the IP address of

- |                |                |
|----------------|----------------|
| a. DHCP Server | b. DNS Server  |
| c. NFS Server  | d. HTTP Server |

(iv) NFS server maintain information regarding shared directory within \_\_\_\_\_ file

- |                 |                  |
|-----------------|------------------|
| a. /etc/nfs     | b. /etc/rpcbind  |
| c. /etc/exports | d. None of these |

(v) Port no of NFS is

- |             |             |
|-------------|-------------|
| a. TCP 2049 | b. TCP 2048 |
| c. TCP 2040 | d. UDP 2011 |

- (vi) Check syntax of httpd.conf file by using
- |             |             |
|-------------|-------------|
| a. httpd -t | b. httpd -T |
| c. HTTPD -t | d. HTTPD -T |
- (vii) allow-transfer { IP address; }; IP address refers
- |                      |                     |
|----------------------|---------------------|
| a. Master DNS Server | b. Slave DNS Server |
| c. DHCP Server       | d. YUM Server       |
- (viii) Canonical Name record store in dns zone files, which is denoted by
- |          |       |
|----------|-------|
| a. NS    | b. A  |
| c. CNAME | d. MX |
- (ix) “rndc reload” is used to
- |                        |                       |
|------------------------|-----------------------|
| a. Transfer hostname   | b. Transfer zone file |
| c. Transfer IP address | d. Transfer FQDN      |
- (x) File Sharing between Windows and Linux is done by
- |          |                  |
|----------|------------------|
| a. FTP   | b. NFS           |
| c. samba | d. None of these |

### Group – B

(Short Answer Type Questions)  
(Answer any *three* from the following)

3 x 5 = 15

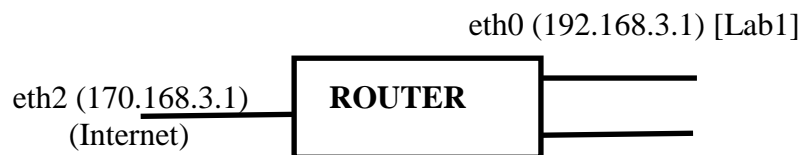
- |  |         |
|--|---------|
| 2. Differentiate Active FTP and Passive FTP.   | [5]     |
| 3. What is the utility of dig command? Describe the function of /etc/resolv.conf file.   | [2 + 3] |
| 4. What is migration tools in LDAP server? Why do we integrate NFS server with LDAP?   | [2 + 3] |
| 5. What is the way to mount a NFS file system permanently? Describe with an example.   | [5]     |
| 6. What is the utility of Squid Server? What is the way to block a host of 192.168.10.13 for accessing HTTP request using squid? | [1 + 4] |

**Group – C**

(Long Answer Type Questions)  
(Answer any *three* from the following)

3 x 15 = 45

7. (a) Which configuration file is used to define a zone? Describe with proper example. [5]  
 (b) Describe the working principle of NAT-PAT with suitable diagram. [9]  
 (c) Which file is required to activate kernel IP forward module? [1]
8. (a) What is the way to change hostname of a machine? Describe it with proper example. [5]  
 (b) Describe the following paths:  
 i. /etc/exports  
 ii. /etc/sysctl.conf  
 iii. /etc/named.conf  
 iv. /etc/hosts  
 v. /etc/sysconfig/network-scripts/ifcfg-lo [10]
9. (a) Describe each chain within Filter table. [3]  
 (b) Solve the following problem of firewall (iptables):



Lab1: 192.168.3.0/24

Lab2: 192.168.2.0/24

- i. What is the procedure for transferring data from each department to internet? [8]  
 ii. What is the procedure to transfer data between the two labs?
- (c) What is the way to block “www.yahoo.com” webpage and “proxy” keyword from SQUID Server? [4]

10. (a) Differentiate primary DNS server and secondary DNS Server. What is the procedure to transfer a zone from master DNS? [5]
- (b) Which service is required to be started for samba server? [2]
- (c) Describe working principle of DHCP server in Linux. [8]
11. Write short notes on any *three* from the following: [3 X 5]
- (a) iptables
  - (b) SQUID Server
  - (c) NFS
  - (d) Static vs dynamic table in DHCP Server