BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – M.Sc.(ANCS)-2022
Course Name – Linux System Engineering–II
Course Code - MNCS203
(Semester II)

Full Marks : 60   **Time : 2:30 Hours**

[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)   1 x 15=15

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

(i)   Identify how do you configure SELinux to support a network service?

      a) By modifying the SELinux policy   b) By modifying the system configuration file
      c) By configuring the network service   d) By modifying the firewall settings

(ii) Classify the FTP configuration that allows anonymous users to upload files but not download them?

      a) read-only access   b) write-only access
      c) read-write access   d) none of the above

(iii) Identify the protocol that protocol is used to send email messages from a client to a server?

      a) SMTP   b) POP3
      c) IMAP   d) HTTP

(iv) Identify the default port number for the Apache HTTP server?

      a) 80   b) 443
      c) 8080   d) 8443

(v)   Choose,which command can be used to view the routing table in Linux?

      a) ip route   b) route -n
      c) netstat -r   d) ifconfig -a

(vi) Select the main purpose of providing NFS and SMB servers in a Linux infrastructure?

      a) To establish a database connection   b) To configure a virtual environment
      c) To share resources among users and systems d) To provide FTP server functionality

(vii) Classify the main purpose of configuring a virtual host in Apache HTTPD?

      a) To provide TLS-enabled websites   b) To configure basic http server

c) To configure a MariaDB SQL database   d) To provide file-based storage

(viii) Choose,the main purpose of providing a MariaDB SQL database in Linux?

a) To configure basic http server   b) To provide file-based storage
c) To share resources among users and systems   d) To establish a database environment

(ix) Select the main purpose of the Linux container service.

a) To establish a database connection   b) To share resources among users and systems
c) To provide FTP server functionality   d) To construct a virtual environment

(x) Justify ,what is the main purpose of network services in Linux infrastructure?

a) To assign IP addresses automatically   b) To provide web service
c) To share resources among systems   d) To centralize email delivery

(xi) Identifywhich is the primary purpose of Linux Network Services?

a) To provide a graphical user interface   b) To enable file sharing between Windows and Linux systems

c) To manage network communication and infrastructure   d) To install and manage applications

(xii) Identify which service provides basic web service in Linux infrastructure?

a) SSH   b) NTP
c) FTP   d) Apache HTTPD

(xiii) Analyze what is the purpose of virtual host in Apache HTTPD configuration?

a) To forward DNS queries   b) To provide basic web service
c) To configure a caching-only server   d) To host multiple websites on one server

(xiv) Choose which protocol is commonly used for secure web communication?

a) HTTP   b) HTTPS
c) FTP   d) SSH

(xv) Identify which network service is responsible for managing user authentication in Linux

a) DNS   b) NTP
c) SSH   d) LDAP

Group-B
(Short Answer Type Questions)   3 x 5=15

2. Visualize the concept of link aggregation in Linux   (3)
3. Summerize the different types of DNS records and what do they do?   (3)
4. Develop a web server and describe how it can be used for an organization's email service.   (3)
5. Identify the steps involved in providing NFS exports and SMB file shares to specific systems and users.   (3)
6. Evaluate the effectiveness of using NFS and SMB servers to share resources within a Linux and hybrid storage infrastructure.   (3)

OR

Create a diagram that illustrates how NFS and SMB servers can be used in a hybrid storage infrastructure   (3)

Group-C
(Long Answer Type Questions)   5 x 6=30

7. Explain how SELinux differs from traditional Linux access control.   (5)
8. Summerize the main features of MariaDB   (5)
9. Determine what are the differences between active and passive FTP modes?   (5)
10. Explain the benefits of network bonding.   (5)

11. Summerize the different types of Data types in MariaDB. (5)
12. Illustrate a file sharing solution that uses both NFS and SMB servers. (5)

OR

Explain the benefits and drawbacks of using FTP for file transfer. (5)

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