Important questions of

MCS-022

for IGNOU Students

Block-1

unit-2

- Explain the concept of a virtual machine in networking with the help of a diagram. Describe how it is useful.(page no.41) 10 marks

- Short note: Network operating system, Distributed operating system(page no.47), Real time operating system(page no.50)

- what is multiprocessor operating(page no.49) 2 marks

unit-3

- Advantages and disadvantages of mesh topology.
  Difference between mesh and star topology.(page no.58)
- Short note on: Hybrid Network Topologies(star-bus and star-ring topology). (page no. 58)
- Differentiate between LAN, MAN and WAN in terms of size, protocols, access mechanism, hardware devices and switching methods.(page no.61)
- What are Data Terminal Equipments and Data communication Equipments.(page no.66) 2 marks
- What is the functionality of a MODEM ? List and explain various types of modems along with their respective features.(page no.68)
- Describe the structure and characteristics of any two different types of guided transmission media.(page no. 72)
- Differentiate between coaxial cable and optical fiber cable.
- Explain the principle of Token Ring protocol.

unit-3(continue)

➢List and explain the significance of the following networking devices.

- Repeaters
- Hubs
- Bridges
- Routers
- Gateways (page no. 75)

unit-4

➢Explain the following in the context of packet switching in data communication :

(i) Datagram Approach

(ii) Virtual Circuit Approach. (page no.89) 10 marks

➢Explain the meaning and utility of unicasting, multicasting and broadcasting(page no.91)

➢Explain the following Application Layer Protocols

- File Transfer Protocol(FTP)
- Trivial File Transfer Protocol (TFTP)
- TELNET
- Remote Login (page no 95)

unit-4(Continue)

- Explain TCP/IP model. (page no. 93)

- Give a mapping between the TCP/IP layers and the OSI layers.

- Briefly explain the following in the context of Domain Name System(DNS) :
  (i) Design Goals
  (ii) Design Principles
  (iii) Architecture.
  (iv) DNS Zones . (page no. 101) 10 marks

- Explain SNMP Architecture. Why is it usually run over LTDP ? Describe its architecture and usage.(page no. 104) 10 marks

Block-2

unit-1

- Explain the memory management in LINUX operating system. (page no.7) 10 marks

- What is virtual memory ? Explain the abstract model of virtual to physical address mapping with reference to Linux operating system.(page no. 8)

- Describe the data structure of a process in LINUX, giving its components and the structure of each. How does the data structure of a process differ from that of a thread ?(page no.11)

unit-2

➢Briefly explain the purpose of the following directories of Linux System :

(i) /bin
(ii) /dev
(iii) /etc
(iv) /lib
(v) /sbin
(vi) /tmp
(vii) /usr/bin
(viii) /mnt
(ix) /usr/local/bin
(x) /usr/games
(xi)/etc/shadow (page no.37) 10 marks

unit-3

- What is a filter ? Give two examples to demonstrate the use of filters in Linux/Unix. (page no.50)

- What is a pipes? Give two examples to demonstrate the use of filters in Linux/Unix. (page no.50)

unit-4

- Write the step-by-step procedure to configure domain name server in Linux operating system.(page no.86)

- Explain the process of configuring A LINUX machine with a Network File System (NFS). (page no.88)

unit-5

- Describe the pre-installation checks and information gathering that need to be carried out before installing LINUX on a computer.(page no.97) 10 marks

- Write the steps to change the password in Linux ? What are the precautions that should be taken while choosing a password.(page no. 107)

- Short note: Backup and Restoration in LINUX.(page no.115)

Block-3

unit-1

- Explain the features of User mode and Kernel mode of Windows 2000 operating system. (pageno. 6) 10 marks [Don't forget to see Windows 2000 layered architecture figure] (Very importent)
- Explain the process of configuring TCP/IP in WINDOWS 2000.
- Explain the following with reference to file organisation of Windows 2000 operating system :
  (i) File Replication Service
  (ii) NTFS
  (iii) FAT 16
  (iv) FAT 32 (page no. 11)

- List and describe the different security features in Windows 2000 operating system.

unit-3

- Discuss the Users' Administration in WINDOWS 2000 by highlighting :

(i) Existing User Accounts Modification
(ii) Managing User Profiles
(iii) Group Accounts Administration
(iv) Auditing (page no.37) 10 marks

- What is a roaming user profile in Windows 2000 ?(page no.38) 3 marks
- Group Policy in Windows 2000 (page no.38) 4 marks
- Explain Virtual Private Network(page no.44) 10 marks

Block-4

unit-1

- Differentiate between Mandatory Access Control (MAC) and Discretionary Access Control (DAC) mechanisms. Also, discuss Hardware Tokens and Software Tokens authentication methods along with their merits and demerits.(page no.11)

- Explain the computer security classifications as per the Trusted Computer System Evaluation Criteria (TCSEC). (page no.19) 10 marks

unit-2

- Explain Firewall and its limitation.(page no. 30)
- System Fault Tolerance technique.(page no. 35)
- Explain RAID and its Level. What are the limitations of disk striping(page no.35)

unit-3

- Backup Domain Controllers (page no.61)

- What is the Windows NT Registry ? What does it consist of ? Explain how you can secure the Registry and audit its critical components. (page no.63)

unit-4

➢What is kerberos ? Explain the complete process of client authentication through kerberos.(page no.68)

➢What is the use of IPsec ? Mention its features, components and implementation options.(page no.81)

➢Encrypting File System Management(Very important, read all 4 EFS topics)

- Encrypting File System (EFS)
- EFS and Users Management
- Data Recovery Management
- EFS Cryptography Management (page no.82)