1. What do you understand by 'Authentication' and 'Encryption' in the context of system security? In this context explain
(i) Kerberos
(ii) IP Security
(iii) RSA Encryption

2.Write short notes on each of the following:
(a) Trojan Horse
(b) Smart Cards

3. Write short notes on each of the following:
(a) Trojan Horse
(b) Smart Cards
(c) Physical threats and security
(d) PGP

4. Explain the DMA controller with block diagram. What is meant by a block transfer?

What are the various phases of an instruction cycle ? Give the micro operation of fetch and decode phases

Compare Static RAM with Dynamic RAM.

5. Using NAND gate generate the AND and NOR functions

6. Which of the following services should be enabled in a secure workstation connected in an Ethernet LAN ? Give reasons for your answer.
Anacron, ftp, netfs, nfs, telnet, sendmail, SSH, syslog, SNMP, time. (Assume the LAN is connected to the Internet but is not connected via Firewall nor is Kerberos used).

7. What is a Socket ? Write two differences between a TCP Socket and a UDP Socket.

8. What are the standard port numbers for (i) Web Server (ii) Mail Server (iii) FTP Server (iv) Telnet ?

9 What is Network Address Translation (NAT) ? Give any two advantages and two disadvantages of NAT.

10 What is VPN ? How is it useful for an organization ?

11. What is a Search Engine ? How is it useful for Internet/Intranet ? Give the names of any four Search engines.

12 What is WAP ? Give any two advantages and two limitations of WAP. Also explain its layered architecture.