**Module 4**

1. List out the transport layer service primitives and their meanings.
2. Explain flow control in the transport layer in detail.
3. Explain the Services of the Transport layer.
4. What are the advantages of the transport layer?
5. Explain the structure of the TCP Header format.
6. Are the TCP Connections half duplex? How the Connections will release in TCP?
7. Explain the TCP Congestion Control.
8. Discuss in detail the connection establishment and release in TCP.
9. Write the structure of the TCP pseudo-header and explain how it is used in the checksum calculation.
10. Explain in detail three-way handshaking for connection establishment in TCP.
11. Discuss the header format of UDP.
12. Define UDP and discuss the different fields of the format of a used datagram.
13. Write about CSMA and CSMA/CD in detail.
14. What are the three different states a CSMA/CD can be in? Explain with a neat diagram.
15. Describe the working principle of Carrier sense multiple access with collision Detection (CSMA/CD).
16. Explain in detail about the carrier sense multiple access protocols.
17. Explain the prevention policies for congestion
18. Give the general principles of various congestion control algorithms.
19. Write about electronic mail in detail
20. What are the reasons for congestion? What are the problems with congestion?
21. With an example explain the Dynamic routing algorithms used in computer networks.
22. Explain about HTTP
23. What is the World Wide Web?
24. What are the protocols associated with WWW? Explain them.
25. Explain the following networks i) ARPANET ii) Internet
26. What is DNS? What resource records are associated with it? Explain.
27. Describe the importance of DNS in the application layer.
28. What are the five basic functions supported in e-mail systems? Explain.
29. With an example explain the sliding window Flow control mechanism.