

2055
M.E. (Electronics and Communication Engineering)
Second Semester
ECE-1207: Advanced Computer Networks

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Part.

x-x-x

- 1.(a) What are the differences between Broadcast and Multicast routing? (2)
- (b) What is Label Switching? (2)
- (c) What are the differences between hubs & bridges ? (2)
- (d) What are the differences between TCP and UDP ? (2)
- (e) What is cryptography ? (2)

Part- A

- 2.(a) Which transmission media are commonly used in computer networks? Discuss their advantages and disadvantages. (5)
- (b) What is the OSI reference model? Explain in detail. (5)
- 3. (a) What Stop-and-Wait flow control, and how does it differ from other flow control protocols? (5)
- (b) What are routing protocols? Explain shortest path routing protocol in detail. (5)
- 4. Write technical notes on the followings:
 - (a) Frame relay (5)
 - (b) Broadband wireless (IEEE 802.16) (5)

Part-B

- 5.(a) What is IPv4 Protocol? In IPv4, fragmentation reassembly is done at the endpoints, rather than at intermediary routers. Does IPv4 permit routers to reassemble packets? What is an important reason why reassembly be done at the end points? (5)

Contd.....P/2

(2)

(b) For a given IP address 172.16.10.22 and mask 255.255.255.240, find the following:

(i) Subnet mask, (ii) broadcast address and (iii) valid range of IP addresses in this network.

(2+2+1)

6.(a) Discuss in detail about the six flags in the TCP header and their application. (5)

(b) SMTP and FTP and HTTP are protocols to transfer messages from one point to another. Compare and contrast their use. (5)

7. Write technical note on the applications of WSN in the following areas:

(a) FTP (5)

(b) Network Security (5)

x-x-x