

MCSE/MSE-105

M.E./M.Tech. I Semester Examination, June 2020

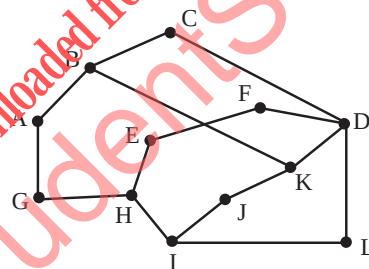
Advanced Computer Networking

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
 ii) All questions carry equal marks.
 iii) Figures to the right indicate the full marks.

1. a) Explain the OSI reference model. Discuss the ways in which it differs from the TCP/IP reference model. 7
- b) What is difference between LAN, MAN and WAN? Discuss advantages and disadvantages of networking. 7
2. a) How does FTP work? Differentiate between passive and active FTP. 7
- b) Consider SMTP, POP3 and IMAP are these stateless protocols. Why or why not? 7
3. a) Illustrate the concepts of multicast routing. Compute a multicast spanning tree for router C in the following subnet for a group with members at routers A, B, C, D, E, F, I and K. 7



- b) What is the difference between EIGRP and OSPF protocols? Discuss. 7
4. a) The IP network 200.198.160.0 is using subnet mask 255.255.255.224. Design the subnets. 7
- b) “In TCP/IP reference model, transport layer is responsible for end-to-end delivery”. Justify the statement with a suitable example. 7
5. a) We know that a Bluetooth device can be in two piconets at the same time. Is there any reason why one device cannot be the master in both of them at the same time? 7
- b) Discuss AAL2 (Application Adaptation Layer version 2) of ATM with the help of diagram. 7

6. a) Compare and contrast the IPv4 and IPv6 header fields. Do they have any fields in common. 7
b) List different carrier sense protocols. How CSMA/CD protocol is different from other CSMA/CA protocol? 7
7. a) What is a VPN (Virtual Private Network) and how does it work? 7
b) What is WAP (Wireless Application Protocol) protocol stack? How does a WAP work? 7
8. a) How does DNS performs data name resolution? What are the different types of name servers? Mention the DNS message format for query and replay messages. 7
b) Write short notes on following: 7
i) MIME
ii) VOIP

downloaded from
StudentSuvidha.com