

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]  
(2064)

14738

M. Tech 2nd Semester Examination

Computer Networks

MT-202

Time : 3 Hours

Max. Marks : 100

*The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.*

**Note :** Attempt one question from question 1 and 2. Attempt one question from question 3 and 4. Attempt one question from question 5 and 6. Attempt one question from question 7 and 8. Question no. 9 is compulsory.

1. Draw and explain OSI reference model. Compare and contrast it with TCP/IP reference model. (20)
2. What is mobile telephone system? Explain all its generations in detail. (20)
3. What is the role of data link layer? Write in detail all the issues to be considered for data link layer. (20)
4. (a) Describe the services stated by 802.11 standard. (10)  
(b) Describe the hamming distance technique for error correction. (10)
5. (a) Draw and explain main header and extension headers of IPV6 protocol. (10)  
(b) What is count to infinity problem? How we can overcome this problem? (10)

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6. (a) What is tunneling? Explain its significance with one example. (10)
- (b) Write a detailed note on Berkeley Sockets. (10)
7. (a) In symmetric key cryptography, how two persons can establish a secret key between themselves? (10)
8. (a) What are various HTTP message headers? Also specify their type and contents. (10)
- (b) What is the procedure to calculate message digest using MD5? (10)
9. (a) Why does ATM use small fixed length cells? (2)
- (b) Write a list of everyday activities where computer networks are used. (4)
- (c) Define Piggybacking. (2)
- (d) What is 1-persistent CSMA? (2)
- (e) Give three examples of protocol parameters that might be negotiated when a connection is setup. (2)
- (f) What is the role of fragmentation in internetworking?(2)
- (g) In electronic mail, what are tasks of a user agent? (4)
- (h) Describe the addressing systems used by SMTP. (2)