

M. E. 1st Semester (CSE) Examination
ADVANCED COMPUTER NETWORKS

Paper-MEC-503

RAIN CYBER CAFE {
 V.C.E. Road, I
 01262-2

Time allowed : 3 hours

Maximum marks : 100

Note : Attempt any five questions.

1. Explain the various design issues of a layered architecture. Highlight in detail a comparative analysis OSI and TCP / IP reference model. 20
2. (a) How is optical fiber different from coaxial cables and its advantages and disadvantages ? 10
 (b) Discuss in detail about error correcting codes. 10
3. Discuss the basic concept of routing and its optionality principle. Also explain the following routing protocols :
 (i) Shortest path first algorithm
 (ii) Distance-vector routing protocol. 20
4. Explain the basic GSM system architecture. Discuss the concept of frequency reuse, co-channel interference, hand-off, trunking efficiency. 20
5. (a) Explain the concept of traffic policing and congestion control techniques. 10

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- (b) Discuss the various elements of TCP/IP in detail along with their header details. 10
- 6. (a) Discuss the ATM reference models in detail. 10
- (b) Explain the concept of virtual LANs and virtual private networks. 10
- 7. (a) Discuss in detail about the various security based protocols in detail. 10
- (b) Explain the telephone switching system in detail. 10
- 8. Write note on following topics –
 - (i) Switching techniques
 - (ii) Sliding window protocol
 - (iii) ESP
 - (iv) DNS