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15CS52

**Fifth Semester B.E. Degree Examination, Dec.20-1:91-402020**  
**Computer Networks**

Time: 3 hrs.

Max. Marks: 80

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

**Module-1**

- 1 a. Explain client server and peer-to-peer architecture. (08 Marks)
- b. Describe HTTP with persistent and non-persistent connections. (08 Marks)

**OR**

- 2 a. Discuss how files are distributed in peer-to-peer application. (08 Marks)
- b. Demonstrate socket implementation using TCP. (08 Marks)

**Module-2**

- 3 a. With a diagram, explain the connection-oriented multiplexing and de-multiplexing. (06 Marks)
- b. Elaborate the three way handshaking in TCP. (05 Marks)
- c. Discuss Go-Back N protocol. (05 Marks)

**OR**

- 4 a. With a neat sketch, explain the TCP segment and its services. (08 Marks)
- b. Design rdt 2.0 protocol. (08 Marks)

**Module-3**

- 5 a. With general format, explain various fields of IPV6. (08 Marks)
- b. Define routing algorithm. List the broadcast routing algorithms. Explain any one of them. (08 Marks)

**OR**

- 6 a. Illustrate Routing Information Protocol (RIP) with suitable diagram. (08 Marks)
- b. Explain the spanning tree algorithm and give its advantages and disadvantages. (08 Marks)

**Module-4**

- 7 a. With a diagram, explain various components of GSM 2G cellular network architecture. (08 Marks)
- b. With a diagram, explain the following with respect to mobile IP: (08 Marks)
- (i) Agent discovery (ii) Registration with the home agent

**OR**

- 8 a. Illustrate the steps involved when a base station does decide to hand-off a mobile user. (08 Marks)
- b. Compare mobile IP and GSM mobility. (04 Marks)
- c. With a diagram, explain the problem and its solution in direct routing. (04 Marks)

**Module-5**

- 9 a. With a neat diagram, explain the CDN operation. (08 Marks)
- b. Briefly explain the properties of Video and Audio. (08 Marks)

**OR**

- 10 a. Explain the working procedure of leaky bucket algorithm. (08 Marks)
- b. Discuss the followings: (i) Adaptive streaming (ii) (08 Marks)