

Code No: J5801/R16

M. Tech. II Semester Regular Examinations, May-2017

COMPUTER NETWORKS

Computer Science & Engineering (58)

Time: 3 Hours

Max. Marks: 60

Answer any FIVE Questions
All Questions Carry Equal Marks

1. a Define Network Topology? Explain different Topologies used in connecting devices. 6
- b Differentiate OSI reference model with the TCP/IP Reference model. 6
2. a Describe Twisted Pair cable and explain its performance. 6
- b Explain in detail about the Frequency Division Multiplexing. 6
3. a Given 1101011011 data frame and generator polynomial $G(x) = x^4 + x + 1$. Derive the transmitted frame using CRC. 6
- b What is the need of Flow control? Explain the common approaches for flow control in data link layer. 6
4. Explain Go-Back-N Automatic Repeat Request protocol. What are the pros and cons of Go-Back-N ARQ protocol? 12
5. a Explain how slotted ALOHA solves the problem of Channel allocation. 6
- b Explain how Bit Map Protocol is used as a Collision Free Protocol. 6
6. a What are the five key assumptions in Dynamic Channel Allocation in LANs and MANs? Explain. 6
- b With a neat diagram explain 802.11 Frame structure. 6
7. What is the drawback of leaky bucket algorithm? Explain how token bucket algorithm overcomes the problem with a neat diagram. 12
8. a Differentiate Virtual-Circuit and Datagram Subnets. 6
- b With suitable example explain the shortest path routing algorithm. 6
