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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Sixth Semester, B.E. - Electronics and Communication Engineering

Semester End Examination; June/July - 2015

Computer Communication Networks

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART - A

1. a. Differentiate between connectionless and connection oriented services. 6
- b. Explain the different types of physical media used in communication systems. 6
- c. Explain Internet protocol stack. 8
2. a. Explain Request-response behavior in HTTP. 8
- b. With the help of a neat diagram, explain File Transport Protocol (FTP). 6
- c. Explain Simple Message Transport Protocol (SMTP) 6
3. a. With the help of neat diagrams explain P2P paradigm with a centralized directory. 8
- b. Explain the process of socket programming in TCP. 8
- c. Explain connectionless transport service (UDP). 4
4. a. With the help of neat diagrams explain the structure of TCP segment explaining all the fields in segment. 8
- b. Explain TCP three way handshake signal diagram in exchanging the segments. 6
- c. Explain End to End congestion control and Network – assisted congestion control 6

PART – B

5. a. With the help of a neat sketch, explain the architecture of Router. 8
- b. With the help of a neat diagram, explain IPV4 datagram format. 8
- c. Explain dual stack approach for transitioning IPV4 to IPV6. 4
6. a. Explain link state (LS) Routing algorithm. Also give a comparison between Link state Routing algorithm and Distance – vector routing algorithm. 12
- b. Explain the principles of Broad-cast routing algorithm. 8
7. a. Explain the sources provided by the link layer. 14
- b. With the help of a necessary example, Explain CRC method of detecting the error. 6
8. a. Explain the functions of a network adapter that runs CSMA / CD protocol over Ethernet. 5
- b. Sketch and explain the point to point (PPP) data frame format. 5
- c. Explain Asynchronous transfer mode (ATM) networks. 10