R15

Code: 15A05502

B.Tech III Year I Semester (R15) Supplementary Examinations June 2018
COMPUTER NETWORKS
(Common to CSE and IT)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
- (a)   Define networks.
- (b)   What is data and signals?
- (c)   Write note about error detection.
- (d)   What is channelization?
- (e)   How parity method can be used for error detection.
- (f)   List the design issues in the network layer.
- (g)   Write the function of transport layer.
- (h)   What are the fields that are present in the UDP header?
- (i)   What is the typical hardware configuration of a server machine?
- (j)   What is POP in an email system?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   (a)   Why layered approach is used for the design of computer networks.
    (b)   Describe the concept of TCP / IP reference model.

OR

3   (a)   Explain in detail about switching and its types.
    (b)   What are the problems with wireless transmission?

UNIT – II

4   (a)   What are the issues of data link layer? Explain.
    (b)   Given the generator polynomial $x^3 + 1$ and bit polynomial $x^7 + x^5 + 1$, compute the checksum using the CRC method.

OR

5   (a)   Explain the concept of HDLC.
    (b)   What are the techniques for channelization?

UNIT – III

6   (a)   Explain the principles of congestion control.
    (b)   What is Distance vector in distance vector routing algorithm?

OR

7   (a)   List and explain in detail the classes of IPV4 addresses.
    (b)   What are the parameters for measuring quality of service?

UNIT – IV

8   Compare and contrast the concept in between UDP and TCP.

OR

9   Discuss in detail about the elements of transport layer.

UNIT – V

10   Elucidate the importance of client / server architecture.
         What are the functions of user agent, message transfer agent and message access agent in e-mail system?

OR

11   Explain in detail about the DNS. Why DNS is implemented as distributed system?