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?

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