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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)

- 1 Answer the following: $(10 \times 02 = 20 \text{ Marks})$
 - (a) Define networks.

Code: 15A05502

- (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, $5 \times 10 = 50 \text{ Marks}$)

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 - I

- 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?