JNTUA UNIVERSITY
PREVIOUS QUESTION PAPERS

Code: 15A04704 **R15**

B.Tech IV Year I Semester (R15) Regular Examinations November/December 2018

DATA COMMUNICATIONS & NETWORKING

(Electronics & Communication Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Differentiate simplex and duplex communication systems.
(b) How data is represented in case of ASCII coding system?
(c) Describe the functions of session and application layers.
(d) Describe unipolar and bipolar signal representation codes.
(e) If the bit rate = 3000 and each signal element carries 6 bits. Find the baud rate.
(f) Differentiate between wireless LAN and Bluetooth.
(g) State modem specifications.
(h) Mention the QOS parameters of network service.
(i) What is congestion and how it occurs?
(j) Explain the principle of datagram.

PART – B

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

UNIT – I

2 (a) What are the applications and advantages of data communication networks?
(b) Explain the classification of data communication networks.

OR

3 (a) What are the principles used in layer architecture?
(b) What are the merits and demerits of TCP/IP model over ISO OSI model?

UNIT – II

4 (a) Describe various modes of data transmission.
(b) Explain the need for flow control in the data link layer.

OR

5 (a) What are the advantages of burst codes and how this is achieved?
(b) Discuss about error control protocol with diagram.

UNIT – III

6 What are the differences between frequency division multiple access & code division multiple access and discuss them?

OR

7 Classify wireless LANs & wired LANs and give LAN standards.

UNIT – IV

8 Explain the various methods used by TCP for congestion control.

OR

9 (a) Describe the distance vector routing algorithm.
(b) Discuss IP addressing procedure and its advantages.

UNIT – V

10 (a) List the transport layer's quality of service parameters and explain them.
(b) Under what conditions of delay, bandwidth, load and packet loss will TCP retransmit significant volumes of data unnecessarily.

OR

11 (a) How web security can be achieved? What are the different mechanisms?
(b) Explain the operation of any one authentication protocol with a neat diagram.

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