

R18

Code No: 155AV

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, March - 2021

DATA COMMUNICATIONS AND NETWORKS

(Electronics and Communication Engineering)

Time: 3 Hours

Max. Marks: 75

**Answer any five questions
All questions carry equal marks**

- 1.a) How does information get passed from one layer to the next in the Internet model? Explain. [7+8]
b) Illustrate how CDMA works in wireless LAN.
- 2.a) What is Cyclic Code? Explain the CRC error detection technique. [8+7]
b) Give a detail note on the Random Access protocols.
- 3.a) Explain the functionality of ICMP protocol. [7+8]
b) What is the format of IPv4 header? Describe the significance of each field.
- 4.a) Describe why an application developer might choose to run an application over UDP rather than TCP. [7+8]
b) Demonstrate three way handshake connection establishment in TCP.
- 5.a) Is an application's architecture different from the network architecture? Defend your answer. [8+7]
b) What is DNS? Explain how DNS works.
- 6.a) Explain the categories of networks. [7+8]
b) Demonstrate Go Back-N sliding window Protocol with an example.
- 7.a) Explain IEEE 802.11 standard for Ethernet with the help of frame format. [8+7]
b) Differentiate between pure ALOHA and slotted ALOHA.
8. Write a short note on:
a) SMTP [8+7]
b) HTTP.

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