

Roll No.

15B1A028

97679

BCA 5th Semester (New)
Examination – November, 2017

DATA COMMUNICATION & NETWORKING

Paper : BCA-303

Time : Three Hours]

[Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*.

1. (a) What are major limitation of twisted pair wire ?
- (b) Differentiate between Baseband and Broadband.
- (c) Differentiate between half duplex and full duplex data communication.
- (d) What is a microwave transmission ?
- (e) What is attenuation' ?
- (f) What is the difference between bit rate and baud rate ?
- (g) What is MAC ?
- (h) What is DSL ?

UNIT - I

2. (a) Describe ATM with their layers. ^{q-6}
- (b) Give the diagram of TCP protocol format and explain the purpose of each field in it.

3. Differentiate between :

- (a) Star and Ring Topology 2
- (b) Active Hub and Passive Hub
- (c) Centralized Systems and Distributed Systems
- (d) Client and Server Model

UNIT - II

4. (a) Discuss the three main switching methods. How is space division switching superior to time division switching?
- (b) Describe Manchester and Differential Manchester encoding schemes.

5. (a) What is Multiplexing ? Explain their types.

- (b) Write down all the three process for Pulse Code Modulation.

UNIT - III

6. Write note on LAN technologies :

- (a) Ethernet
- (b) Switched Ethernet

(c) VLAN

(d) Token Ring

(e) Bluetooth 2

7. Define Network Hardware Components : Connectors, Transceivers, Repeaters, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways.

UNIT - IV

8. (a) Differentiate between Distance Vector Routing and Link State Routing.

(b) Define Congestion Control Algorithms.

9. (a) Describe Flooding and Shortest Path Routing.

- (b) What do you mean by Cryptography ? Explain their categories Symmetric - Key Algorithms and Public-Key Algorithms.