

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
BCA, Summer 2016 – 17, Examination

Semester: 3
Subject Code: 05101202
Subject Name: Data Communication and Computer Networks

Date: 29/06/2017
Time: 10:00am to 01:00pm
Total Marks: 60

Instructions:

1. Attempt all questions from each section.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Write section-A, section-B on separate answer sheets.

SECTION-A

Q.1 Answer the following Questions. (Any 10) (10)

1. What is error detection?
2. List out Broadcast routing algorithms.
3. Define Computer Network.
4. List out the algorithm can be used for network layer design.
5. List out different types of antennas used in Microwave communication.
6. Perform Byte stuffing: A B ESC FLG P R
7. What is routing table?
8. What is the dis-advantage of star topology?
9. Write the formula which finds maximum distance between two antennas of Microwave communication
10. What is Network Architecture?
11. List out application layer protocol.

Q.2 Answer the following Questions.

- a) Differentiate between Guided Media and Unguided Media (05)
- b) Explain Hamming code with example. (05)

OR

- (b) Explain in brief selective repeat protocol. What is the benefit of using this protocol? (05)

Q.3 Do as directed.

- a) Explain Functions of Network Layer in detail. (07)
- b) Define LAN, MAN, WAN. (03)

OR

Q.3 Do as directed.

- a) Differentiate between STP and UTP (07)
- b) To send 265 kbps over a noiseless channel with a bandwidth of 20 kHz. How many signal levels do we need? (03)

SECTION-B

Q.1 Answer the following Questions in brief.(Any 5) (10)

1. What is count to infinity problem in Distance vector routing?
2. Write any 3 applications of Smart Home Networks..
3. Explain Stop & Wait protocol with example.
4. List out the functionality of Transport Layer.
5. What is Remote Procedure Call?
6. Explain the timer used in Go-back-N protocol.

Q.2 Answer the following Questions.

- a) Write short note on Link State routing. (05)
- b) Differentiate Unicast & Multicast Routing. (05)

OR

- (b) Write short note on UDP. (05)

Q.3 Answer the following Questions.

- a) Explain transmission impairments. (05)
- b) Draw the IPv4 header and explain all its fields (05)

OR

Q.3 Answer the following Questions.

- a) Write short note on digital modulation and multiplexing. (05)
- b) Discuss basic functions of email. (05)