COURSE CODE: DCAP406
COURSE TITLE: COMPUTER NETWORKS

B
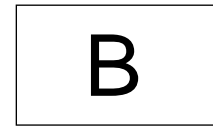
Date of Exam: 2 March
Time Allowed: 3 hours

Session 09:30-12:30
Max. Marks: 80

1. *This paper contains 10 questions divided in two parts on 1 page.*
2. ***Part A is compulsory.***
3. ***In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the questions chosen.***
4. *The marks assigned to each question are shown at the end of each question in square brackets.*
5. *Answer all questions in serial order.*
6. The student is required to attempt the question paper in ***English medium only.***

PART A

Q1.

   a. List down the various network topologies?
   b. Name the various protocols that belong to TCP/IP protocol suite?

   c. Which layers of OSI model are absent in TCP/IP model?

   d. Difference between UTP and STP cable.

   e. Name the various routing algorithms used ?

   f. List down two merits of Bluetooth technology?

   g. What is cipher text?

   h. Compare TCP and UDP protocol

   i. Name the various design issues of data link layer?

   j. List down two important benefits of wireless LANs   (10x2=20)

PART B

Q2. Give a detailed comparative study of OSI and TCP/IP model?

Q3. Discuss the various network topologies? Also discuss the advantages and disadvantages of each?

Q4. (a) How is the working and characteristics of hub entirely different from switches?

   (b) Discuss the different types of ciphers used in cryptography?

Q5. Describe how the security of a network is under a threat? What are the security issues faced by the network administrator?

Q6. How SMTP works? Stepwise explain how a mail is sent from source to destination

Q7. "There are a number of ways to perform switching". Discuss each of them?

Q8. Elaborate the working and use of Public switched telephone network?

Q9. Compute the CRC-4 character for the following message using a "divisor" constant of 10011:

   1100 0110 1011 01

Q10. Discuss in detail the various network layer design issues?   (6x10=60)