

Exam.Code:0928
Sub. Code: 6584

2023

B.E. (Electronics and Communication Engineering)
Fourth Semester
EC-405: Computer Networks

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit. Use of scientific calculator is allowed.

x-x-x

I. Attempt the following:-

- (a) State different types of networks.
- (b) What is the task of application layer?
- (c) What is TDMA?
- (d) What is frequency reuse?
- (e) What is the limitation of star topology? (5x2)

UNIT - I

- II. a) What do you mean by computer network? Classify computer networks and explain them in brief.
- b) Compare narrow band and broad band ISDN. (2x5)

- III. a) DNS uses UDP instead of TCP. If a DNS packet is lost, there is no automatic recovery. Does this cause a problem, and if so, how it is solved?
- b) Discuss about the design issues of computer networks. (2x5)

IV. The following character encoding is used in a data link protocol:

A: 01000111; B:11100011; FLAG: 01111110; ESC: 11100000

Show the bit sequence transmitted (in binary) for the four-character frame: A

B ESC FLAG when each of the following framing methods are used:

- i) Character Count
- ii) Flag bytes with byte stuffing
- iii) Starting and ending flag bytes, with bit stuffing. (10)

P.T.O.

(2)

UNIT - II

- V. a) What are the Security features of IPv6?
b) Explain Simple Key management for internet protocols in detail? (2x5)
- VI. a) Explain in brief about cryptography.
b) How does UDP differ from TCP? List the applications of UDP. (2x5)
- VII. Elaborate on crash recovery techniques in transport layer. (10)

x-x-x