

Exam.Code:0918

Sub. Code: 6407

2023

B.E. (Computer Science and Engineering)

Sixth Semester

CS-601: Computer Networks and Security

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.

x-x-x

I. Attempt the following:-

- a) Compare TCP and SCTP protocols and their suitability.
- b) What is crash recovery? In which layer it takes place?
- c) Compare Symmetric and Asymmetric key encryption algorithms.
- d) In which layer and how does congestion control take place in the network?
- e) Compare the format of IPv4 and IPv6 protocols. (5x2)

UNIT - I

- II. a) Map various layer of OSI and TCP/IP models.
b) Compare functionality of network and transport layers in detail using examples. (2x5)
- III. Compare various routing algorithms using real-life examples. (10)
- IV. a) Compare various congestion control algorithms using examples.
b) Compare various transport protocols and discuss their respective suitability. (2x5)

UNIT - II

- V. a) Demonstrate various FTP commands and replies.
b) Explain the working of digital signatures using examples. (2x5)
- VI. a) Distinguish between Symmetric Key and Public Key authentication using suitable examples. Also discuss their respective pros and cons.
b) Analyse the role and working of Firewall in a network using real world case studies. (2x5)
- VII. a) Explain the working of S/MIME protocol using examples.
b) Discuss the architecture of IP Security using a suitable example. (2x5)

x-x-x