

FACULTY OF ENGINEERING

B.E. (CSE) V- Semester (AICTE) (Main) (New) Examination, February/ March 2023

Subject: Computer Networks

Time: 3 Hours

Max. Marks: 70

- Note:** (i) First question is compulsory and answer any four questions from the remaining six questions. Each questions carries 14 Marks.
(ii) Answer to each question must be written at one place only and in the same order as they occur in the question paper.
(iii) Missing data, if any, may be suitably assumed.

1. a) Differentiate between TCP and UDP.
b) What are subnets?
c) List the different IPv4 Address Classes.
d) Discuss different types of errors with a suitable diagram.
e) List the types of network attacks.
f) What do you mean by DNS?
g) What is ARP & RARP?
2. a) Explain the OSI Network model with a neat diagram.
b) State the differences between ISO-OSI and TCP/IP Network model.
3. a) Write short notes on Carrier-sense multiple access with collision detection (CSMA/CD) protocol.
b) Describe in detail with neat diagram Flow control and Error control protocols
4. a) Draw a neat diagram of IPv4 header. Explain each field.
b) Draw the 802.3 MAC frame format. Explain each field in detail
5. a) Difference between Circuit Switching and Packet switching.
b) Explain techniques to improve QoS in computer Networks.
6. a) With neat diagram explain RSA Encryption Algorithm, What is public key in RSA algorithm?
b) Explain in detail time division(TDM) synchronous and asynchronous data transmission.
7. a) List the elementary socket system calls used in connection-oriented communication and explain their function.
b) Explain in detail Bluetooth protocol Architecture.