

FACULTY OF ENGINEERING

B.E. (I.T) V - Semester (AICTE) (Main & Backlog) (New) Examination, February/ March 2025

Subject: Computer Networks

Max. Marks: 70

Time: 3 Hours

Note: (i) First question is compulsory and answer any four questions from the remaining six questions. Each question 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) Define a Computer Network and what are the uses of computer networks.
b) What are the services of network layer?
c) What is classful addressing and classless addressing?
d) Define socket.
e) List Elements of Transport protocol.
f) What is the purpose of DNS?
g) What are the Services of Email?

2. a) Compare TCP/IP and ISO-OSI reference models.
b) Explain link state routing algorithm with an example.

3. a) Classify IP addresses and explain.
b) Discuss Network layer design issues.

4. a) What are Elementary sockets? Explain.
b) Explain in detail about RPC and discuss its transparency issues.

5. a) Explain Multiplexing and Crash recovery in Transport layer
b) Explain Internet Transport Protocols: UDP & TCP.

6. a) What is a Resource Record in the context of DNS. Give its format.
b) Write about Dynamic web document in WWW.

7. Write short notes on:
a) OSPF and BGP
b) Flooding and Hierarchical routing algorithm.
c) Tunnelling