

**II B. TECH II SEMESTER REGULAR EXAMINATIONS, JUNE - 2022**  
**COMPUTER NETWORKS****CSE (IOT AND CYBERSECURITY WITH BLOCKCHAIN TECHNOLOGY)**

Time: 3 hours

Max. Marks: 70

**Note:** Answer **ONE** question from each unit (**5 × 14 = 70 Marks**)  
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## UNIT-I

1. a) List the layers of Internet model. Explain briefly about the [7M]  
functionality of each layer.
- b) Compare OSI reference model with Internet protocol suite. [7M]  
Write your observations.

(OR)

2. a) Explain the concept of circuit switching in networks in brief. [7M]
- b) If the data link layer can detect errors between hops, why do [7M]  
you think we need another checking mechanism at transport  
layer? Explain briefly.

## UNIT-II

3. a) Illustrate the concepts of bit and byte stuffing with proper [7M]  
diagrams.
- b) Discuss the process of encoding and decoding a message with [7M]  
Hamming code.

(OR)

4. a) Explain Go-Back-N ARQ protocol with suitable flow diagrams. [7M]
- b) Explain CSMA/CA protocol with neat diagram. [7M]

## UNIT-III

5. a) Identify the differences between classful addressing and [7M]  
classless addressing in IPv4. Explain.
- b) Draw the IPv4 datagram format and explain each field briefly. [7M]

(OR)

6. Explain in detail about Distance vector Routing algorithm with [14M]  
proper example. Also write about count to infinity problem.

## UNIT-IV

7. a) List the functions of Transport Layer. Explain briefly. [7M]
- b) Discuss in detail about methods to control congestion in TCP. [7M]

(OR)

8. a) With a neat diagram explain in detail about TCP Segment Structure. [7M]  
b) Explain Open Loop congestion control policy in brief. [7M]

UNIT-V

9. a) Write the purpose of SMTP in e-mail. Explain. [10M]  
b) What are the different FTP transfer modes? Explain. [4M]

(OR)

10. Write about DNS in brief. [14M]

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