

Code No: **R17A0514****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

**III B.Tech I Semester Supplementary Examinations, July/August 2021****Computer Networks****(CSE & IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 70**

Answer Any **Five** Questions  
All Questions carries equal marks.

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- 1 a) Explain briefly about TCP/IP Model. [8M]  
b) What are the Types of Wireless Transmission Media? Explain it. [6M]
- 2 a) What are the differences between TCP/IP Model and OSI Model? [7M]  
b) What is Network Topology? Explain different types of topologies in Network. [7M]
- 3 a) What are the Elementary Data Link Layer Protocols? Discuss it. [8M]  
b) Discuss about Ethernet MAC Sub Layer. [6M]
- 4 a) What is Sliding Window Protocol? Discuss with Neat Example [8M]  
b) What are the Network Connecting Devices? Explain it. [6M]
- 5 a) Draw a neat Network diagram to explain the routing functionality of Link State Routing Algorithm. [10M]  
b) What is Optimality Principle in Network Routing? [4M]
- 6 a) What is CIDR? Why CIDR needed Explain with Example? [8M]  
b) What are the Differences between IPv4 and IPv6 Addressing ? [6M]
- 7 a) What are the Transport Layer Services? Discuss it [6M]  
b) Draw and explain each field in the TCP Segment header [8M]
- 8 Write a Brief Notes on Following  
a) World Wide Web [5M]  
b) E-Mail [5M]  
c) Telnet [4M]

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Code No: **R15A0514****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech II Semester Supplementary Examinations, December 2019****Computer Networks****(IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B

Part A is compulsory which carries 25 marks and Answer all questions.

Part B Consists of 5 SECTIONS (One SECTION for each UNIT). Answer FIVE Questions,

Choosing ONE Question from each SECTION and each Question carries 10 marks.

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**Part- A (25 Marks)**

- 1.a.Explain the characteristics of twisted pair cable. [2M]
- b. Differentiate switch and hub. [3M]
- c. What is telnet? Write purpose of telnet. [2M]
- d. Define pure ALOHA and slotted ALOHA. [3M]
- e. Write about cyclic redundancy checking(CRC). [2M]
- f. Give the advantages of hierarchical routing. [3M]
- g.Discuss the principles of internetworking. [2M]
- h.What is CIDR addressing? [3M]
- i. Compare HTTP and FTP . [2M]
- j. What are the two main categories of DNS messages? [3M]

**Part-B (50 Marks)****SECTION-I**

2. a)Explain the functions of various layers in ISO-OSI reference model. [5M+5M]
- b)Explain the term sliding window.Also illustrate and explain the operation of selective repeat.

**OR**

3. a)Discuss about unguided transmission media.
- b)Explain stop and wait protocol. [5M+5M]

**SECTION-II**

4. a)Explain CSMA/CD protocol and how does it detect collision?
- b)Discuss about switched and fast Ethernet. [5M+5M]

**OR**

5. a)Explain MAC sub layer protocol in detail.
- b)Discuss about spanning tree bridges. [5M+5M]

**SECTION-III**

- 6 .a)Elucidate Distance Vector Routing Algorithm with example.
- b)Describe the problem and solutions associated with distance vector routing. [5M+5M]

**OR**

7. a)Explain the general principles of congestion control.
- b)Describe congestion control in datagram subnets. [5M+5M]

**SECTION-IV**

- 8.Given a network address of 192.18.100.0 and a subnet mask of 255.255.255.192 .
- a)How many subnets are created?
- b)How many hosts are there per subnet? [5M+5M]

**OR**

9. a)Discuss ICMP Messages.
- b)Explain Tunneling in Internet layer. [5M+5M]

**SECTION-V**

10. a) Explain about the TCP timer management.

b) Explain the payload types of Real Time Transport Protocol.

**[5M+5M]**

**OR**

11. Describe RSA algorithm.

**[10M]**

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**III B.Tech II Semester Supplementary Examinations, February 2021****Computer Networks****(IT)**

<b>Roll No</b>										
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**Time: 2 hours 30 min****Max. Marks: 75**

Answer Any **Five** Questions  
All Questions carries equal marks.

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- 1 Explain OSI network architecture and explain the functionalities of every layer in detail? [15M]
- 2 Comparison of the OSI and TCP/IP reference model [15M]
- 3 Explain the different types of error detection & Correction [15M]
- 4 Write short notes on [15M]  
a) Router b) Bridge c) Gateway d) Repeaters e) Hub
- 5 Explain Distance vector routing algorithm with an example & problems and solutions associated with Distance vector routing. [15M]
- 6 Explain about Dijkstra shortest path algorithm with an example? [15M]
- 7 How crash recovery is managed at the transport layer & What are the services provided by the transport layer to upper layers [15M]
- 8 Write short notes on [15M]  
a) E-mail b) WWW c) Telnet d) DNS e) SSH

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**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

**III B.Tech I Semester Regular Examinations, November 2019****Computer Networks****(CSE & IT)**

<b>Roll No</b>									
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**Time: 3 hours****Max. Marks: 70**

**Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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**SECTION-I**

- 1 a) Compare and contrast a circuit-switched network and a packet-switched network [7M]  
b) Explain ISO/OSI Reference model with neat diagram? [7M]

OR

- 2 a) Write short notes on TCP/IP model and explain with neat diagram. [7M]  
b) Explain Guided media with neat diagrams. [7M]

**SECTION-II**

- 3 a) Compare various sliding window protocols of data link layer [7M] [7M]  
b) How performance is improved in CSMA/CD protocol compared to CSMA protocol? Explain? [7M]

OR

- 4 a) Given 1101011011 data frame and generator polynomial  $G(x) = x^4 + x + 1$ . [7M]  
Derive the transmitted frame  
b) Give a detail note on the ALOHA protocols. [7M]

**SECTION-III**

- 5 a) Describe the problems and solutions associated with distance vector routing. [7M]  
b) Distinguish ARP and RARP Protocols and their services. [7M]

OR

- 6 a) Describe Dijkstra shortest path algorithm. Also show working of Dijkstra algorithm with the help of an example. [7M]  
b) Discuss the different IP addressing methods. [7M]

**SECTION-IV**

- 7 a) Describe three-way hand shaking protocol to establish the transport level connection. [5M]  
b) Explain TCP connection management with neat diagram [9M]

OR

- 8 a) Illustrate the connection establishment and release in transport layer. [7M]  
b) Describe in detail about TCP sliding window [7M]

**SECTION-V**

- 9 a) Explain Domain Name System. [7M]  
b) Compare and contrast client/server with peer-to-peer data transfer over networks? [7M]

OR

- 10 a) Describe in detail about the World Wide Web (WWW)? [7M]  
b) Explain RSA algorithm in detail [7M]

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