Code No: **RT41042**   **R13**   Set No. 1

IV B.Tech I Semester Regular/Supplementary Examinations, October/November - 2017
COMPUTER NETWORKS
(Electronics and Communication Engineering)

Time: 3 hours   Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
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PART–A *(22 Marks)*

1. a) What are the advantages of and draw backs of mesh topology   [4]
    b) Explain about the Novell networks.   [4]
    c) What is the difference between Fixed framing and variable length framing? [4]
    d) Explain the concept involved in Flooding algorithm.   [4]
    e) What is the significance of TCP protocol?   [3]
    f) Write short notes on E-Mail.   [3]

PART–B *(3x16 = 48 Marks)*

2. a) Compare the WAN, LAN and MAN topologies.   [8]
    b) Define Encapsulation and Peer to Peer communication in the layered
        architecture.   [8]

3. a) With neat sketch Explain Packet switching technique in detail.   [8]
    b) Give brief explanation about copper cables with neat sketch.   [8]

4. a) Describe the stop and wait protocol with neat sketch.   [8]
    b) What is the significance of data link layer? Explain the design issues of data
        link layer.   [8]

5. a) Explain Distance Vector routing algorithm with an example.   [8]
    b)   What are the differences between Static Routing Algorithm and Dynamic
        Routing Algorithm?   [8]

6. a) Explain TCP Connection management Finite State Machine. Explain all states
        in it.   [8]
    b) Explain the different layers of ATM.   [8]

7.   Write short notes on
        (a) SNMP
        (b) Network Security   [16]

Code No: **RT41042**   **R13**   **Set No. 2**

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COMPUTER NETWORKS
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Time: 3 hours   Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
*****

PART–A *(22 Marks)*

1.	a)	What are the advantages of and draw backs of Star topology?	[4]
	b)	Differentiate Guided and Unguided transmission medias.	[4]
	c)	Explain about Stop and wait protocol.	[3]
	d)	What is the significance of The Network layer in the ATM networks?	[4]
	e)	List the different layers of ATM.	[3]
	f)	What are the fundamental cryptographic principles?	[4]

PART–B *(3x16 = 48 Marks)*

2.	a)	What are the responsibilities of Presentation layer and Session layer of OSI model?	[8]
	b)	What is Internet? Explain the Architecture of Internet with a neat Sketch.	[8]
3.	a)	What are the different cable topologies of an Ethernet? Explain Manchester Encoding.	[8]
	b)	With neat sketch Explain VCN switching technique in detail.	[8]
4.	a)	What is CSMA with CD? What are the three different states a CSMA/CD can be in? Explain with a neat diagram.	[8]
	b)	What are the different classes of bridges? Explain with neat sketches.	[8]
5.	a)	Explain shortest path routing algorithm with an example.	[8]
	b)	Discuss the internetworking of network layer in internet.	[8]
6.	a)	How a Connection is established in a Transport Protocol. Explain three protocol scenarios for establishing a connection.	[8]
	b)	Explain in detail about Connection management.	[8]
7.	a)	Write short notes on Electronic Mail.	[8]
	b)	How DNS service maps domain names to IP addresses.	[8]

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Code No: **RT41042**   **R13**   Set No. 3

IV B.Tech I Semester Regular/Supplementary Examinations, October/November - 2017
COMPUTER NETWORKS
(Electronics and Communication Engineering)

Time: 3 hours   Max. Marks: 70

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
*****

PART–A *(22 Marks)*

1. a) What are the advantages of and draw backs of bus topology   [4]
    b) Explain why the cables are twisted in twisted pair wireless system? [4]
    c) What are the design issues of Data Link layer?   [4]
    d) What is the significance of The Network layer in the internet   [4]
    e) What are the different transport layer protocols   [3]
    f) Write short notes on Multi Media.   [3]

PART–B *(3x16 = 48 Marks)*

2. a) What are the responsibilities of Network layer and Transport layer of OSI model [8]
    b) Explain Novell Networks and Arpanet.   [8]

3. a) What are the different categories of UTP and compare them.   [8]
    b) Explain in detail about encoding asynchronous communications.   [8]

4. a) Compare the throughput of pure aloha and slotted aloha.   [8]
    b) Explain flow control mechanism using Sliding window protocol.   [8]

5. a) Explain Broadcast routing algorithm with an example   [8]
    b) Differentiate the open loop congestion control and closed loop congestion control [8]

6. a) Write a short note on Remote Procedure Call.   [8]
    b) Explain the structure of TCP Header format.   [8]

7. a) How SHA-1 Algorithm works.   [8]
    b) What are the protocols associated with WWW. Explain them.   [8]

Code No: **RT41042**   **R13** | **Set No. 4** |

IV B.Tech I Semester Regular/Supplementary Examinations, October/November - 2017
COMPUTER NETWORKS
(Electronics and Communication Engineering)

Time: 3 hours   **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any THREE questions from Part-B
*****

PART–A *(22 Marks)*

1.	a)	What are the advantages of and draw backs of LAN?	[4]
	b)	Write a short note on Category 3 UTP and Category 5 UTP.	[4]
	c)	What are the differences between 10base2 and 10 base5 cables?	[4]
	d)	What are the General Principles of Congestion prevention policies?	[4]
	e)	What are the different services provided by transport layer?	[3]
	f)	Write short notes on Name Servers.	[3]

PART–B *(3x16 = 48 Marks)*

2.	a)	What are the responsibilities of Physical layer and Data link layer of OSI model	[8]
	b)	Explain the different Network topologies and their advantages in detail.	[8]
3.	a)	What are the specifications of Narrow band ISDN?	[8]
	b)	With neat sketch Explain Circuit switching technique in detail.	[8]
4.	a)	What is Carrier Sense Multiple Access? What are the different approaches?	[8]
	b)	What is the significance of Error control Mechanism? Explain how it is achieved by CRC?	[8]
5.	a)	Explain Hierarchical routing algorithm with an example.	[8]
	b)	How Congestion control in Datagram Subnets takes place?	[8]
6.	a)	Are the TCP Connections are half- duplex? How the Connections will release in TCP?	[8]
	b)	Explain flow control in transport layer in detail.	[8]
7.	a)	Explain the working of domain name system.	[8]
	b)	What is multimedia? Explain in detail about voice over IP?	[8]