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**

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 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]

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
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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]