

Code No: **RT41042**

**R13**

**Set No. 1**

**IV B.Tech I Semester Regular/Supplementary Examinations, Oct/Nov - 2018**

**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) Write about Arpanet. [2]
- b) Write the advantages of optical fiber over twisted and coaxial cables. [5]
- c) Define bridge? Write about types of bridges. [4]
- d) Write about various classes of IP addresses. [4]
- e) What are the advantages of transport layer? [5]
- f) Define Digital Signature. [2]

**PART-B (3x16 = 48 Marks)**

2. a) What do you mean by computer network? Classify computer networks and Explain them in brief. [8]
- b) Differentiate between OSI and TCP /IP reference models. [8]
3. a) Why twisted pair cables are preferable over coaxial cables? Explain. [8]
- b) Compare narrow band and broad band ISDN. [8]
4. a) What are the various types of error detection methods? [8]
- b) Compare simple and transparent bridges. [8]
5. a) Give the general principles of various congestion control algorithms. [8]
- b) With an example, explain the distance vector routing. [8]
6. a) Write the structure of TCP pseudo header and explain how it is used in checksum calculation. [8]
- b) How does UDP differ from TCP? List the applications of UDP. [8]
7. a) Define FTP. Discuss in brief about FTP. [8]
- b) Explain in brief about DNS. [8]



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**Set No. 2**

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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*

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**PART-A** (22 Marks)

1. a) What are the advantages of having layered architecture? [5]
- b) Discuss about unguided transmission media. [5]
- c) Write about Hamming code. [4]
- d) Define spanning tree. [2]
- e) Write about any two service primitives of Transport layer. [4]
- f) What is the purpose of DNS? [2]

**PART-B** (3x16 = 48 Marks)

2. a) Distinguish between TCP/IP and OSI Model. [8]
- b) Explain detail about Network Hardware. How network hardware support the communication of two systems? [8]
3. a) Differentiate between guided and unguided transmission media. [8]
- b) What are the advantages of Narrow band and broad band ISDN? [8]
4. a) Explain detail about the carrier sense multiple access protocols. [8]
- b) Describe the working principle of Carrier sense multiple access with collision Detection (CSMA/CD). [8]
5. a) Give the details about Coke packets & Load shedding. [8]
- b) Distinguish between Leaky Bucket algorithm and Token Bucket algorithm. [8]
6. a) Write a detailed note on transport services. [8]
- b) Explain in detail three way handshaking for connection establishment in TCP. [8]
7. a) What is electronic E-mail? Describe in brief about the two architectures of E-Mail. [8]
- b) Distinguish between symmetric and asymmetric encryption. [8]



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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*

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**PART-A** (22 Marks)

1. a) What are the advantages of MAN? [5]
- b) Write about the twisted coaxial cables. [5]
- c) Draw the Ethernet frame format. [4]
- d) Define Tunneling. [2]
- e) Write about UDP. [2]
- f) What is the function of SMTP? [4]

**PART-B** (3x16 = 48 Marks)

2. a) What are the distinct characteristics of local area networks, explain briefly? [8]
- b) Discuss in brief about TCP/IP protocol Suite. [8]
3. a) Explain details about ISDN. Describe the types of ISDN. [8]
- b) Give brief description about the co-axial cables and also mention their disadvantages. [8]
4. a) What is pure ALOHA and slotted ALOHA? Mention the advantages of slotted ALOHA. [8]
- b) What are the draw backs of stop and wait protocol? How can they overcome by sliding window protocol? [8]
5. a) What are the static routing algorithms? Explain the concept of flooding. [8]
- b) Explain the prevention polices of congestion. [8]
6. a) What are the functions of transport layer? State transport service primitives. [8]
- b) Explain the layer of ATM. [8]
7. a) Explain in brief about the formats of HTTP request and Response messages? [8]
- b) What is a name server? List and explain the features of various name servers. [8]



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**Set No. 4**

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**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) Define Computer network. [2]
- b) Discuss the construction of coaxial cable. [6]
- c) What are the advantages of slotted Aloha? [5]
- d) What is the difference between broad casting and multicasting? [5]
- e) What are the transport layer protocols? [2]
- f) What is a firewall? [2]

**PART-B (3x16 = 48 Marks)**

2. a) Why are a LAN required and what objectives are achieved by having a LAN? [8]
- b) Define Topology. Discuss in brief about computer network topologies. [8]
3. a) Describe the Transmission Media. What are the types of Transmission Media? [8]
- b) Discuss various channels supported by ISDN bit pipe. [8]
4. a) Discuss about CSMA/CD protocol and its basic functions. [8]
- b) What is the significance of bridge? What are the different types of bridges? Explain. [8]
5. a) With neat sketch, Explain virtual circuit switching. [8]
- b) What is multicasting? Briefly discuss multicasting techniques and protocols. [8]
6. a) Discuss various flow control mechanisms in transport layer. [8]
- b) Define UDP and discuss the different fields of the format of a used datagram. [8]
7. a) What is World Wide Web? Explain details about HTTP. [8]
- b) Describe importance of DNS in application layer. [8]

