Roll No. | | | | | | | | | | |

Total No. of Questions : 09

Total No. of Pages : 02

B.Tech. (CSE) (Sem.–5)

COMPUTER NETWORKS

Subject Code : BTCS-504-18

M.Code : 78323

Date of Examination : 29-11-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) What is IPv4?

   b) What is the role of firewalls in computer networks?

   c) What is the use of FTP protocol?

   d) What is flow control?

   e) List major transmission media used for data communication.

   f) What is source routing?

   g) What is the role of piggybacking at data link layer?

   h) List the components of a URL.

   i) What is Frequency division multiplexing?

   j) What is checksum?

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SECTION-B

2. Compare and contrast distance vector routing with link state routing.

3. Explain the working of CSMA/CD protocol.

4. Differentiate between Go-Back-N and Selective Repeat ARQ protocols.

5. Discuss the significance and functionality of leaky bucket and token bucket algorithms at transport layer.

6. List and explain the features of each layer in TCP/IP reference model.

SECTION-C

7. Explain the three-way handshake based connection establishment process of TCP protocol in detail.

8. What is HTTP and how does it enable the exchange of resources on the web? Provide an example illustrating an HTTP client-server interaction.

9. **Write short notes on:**

   a) TELNET

   b) DHCP

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B.Tech. (CSE) (Sem.–5)

COMPUTER NETWORKS

Subject Code : BTCS504-18

M.Code : 78323

Date of Examination : 24-06-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
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3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. **Write briefly :**

   a) Write advantages of Bus Topology.

   b) Define the term Frequency Division Multiplexing.

   c) Explain the term Block Coding in brief.

   d) What is Error? Explain types of error.

   e) Explain in brief about the term RARP.

   f) What do you mean by Unicast Routing protocols.

   g) What is the main advantage of UDP over TCP?

   h) Explain in brief about Quality of service.

   i) Explain in brief about the term WWW.

   j) Discuss TELNET in brief.

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SECTION-B

2. Explain Wired LAN and Wireless LANs in detail.
3. Explain CSMA/CA in detail.
4. Write a detailed note on IPV6.
5. Write a detailed note on Transmission Control Protocol (TCP).
6. Write a detailed note on Firewalls.

SECTION-C

7. Write a detailed note on OSI Model.
8. **Explain in detail about following algorithms :**

   a) Leaky Bucket

   b) Token Bucket.

9. **Write a detailed note on the following :**

   a) Domain Name Space (DNS)

   b) DDNS

   c) SNMP.

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B.Tech. (CSE) (Sem.–5)

COMPUTER NETWORKS

Subject Code : BTCS 504-18

M.Code : 78323

Date of Examination : 28-11-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. **Answer briefly :**

   a) What is WWW?

   b) What is BOOTP protocol?

   c) What do you mean by Quality of Service at transport layer?

   d) What is IPv6?

   e) Define URL.

   f) List the key properties of Bluetooth protocol.

   g) What is time division multiplexing?

   h) What is wired LAN and wireless LAN?

   i) List the important features of CSMA protocol.

   j) What do you mean by spread spectrum?

SECTION-B

2. List properties and uses of various transmission media used in computer networks.

3. Discuss the role of DHCP protocol at network layer.

4. How UDP differs from TCP protocol?

5. Compute the value of the checksum if a message 1001 1100 1010 0011 is transmitted using Internet Checksum (4-bit word)?

6. How client establish remote connection to server using TELNET protocol?

SECTION-C

7. Explain various types of sliding-window protocols at data link layer and illustrate the working of each with suitable example.

8. What is network topology? Explain the different network topologies with suitable examples.

9. **Write short notes on :**

   a) HTTP

   b) Piggybacking.

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Total No. of Questions : 09 Total No. of Pages : 02

B.Tech. (CSE)/(CS)/(IOT) (Sem.–5)
COMPUTER NETWORKS
Subject Code : BTCS 504-18
M.Code : 93919
Date of Examination: 20-11-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

a) What is the need of Protocols?

b) What is Time division multiplexing?

c) Explain in brief about Block coding.

d) Explain the term "carrier sense" in CSMA/CD.

e) How does BOOTP differ from DHCP?

f) What are the limitations of IPv4?

g) Write the advantages of using a token bucket algorithm.

h) Differentiate between Transmission Control Protocol and UDP User Datagram Protocol.

i) Explain in brief about WWW.

j) What is a TELNET? Explain in brief.

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SECTION-B

2. Write a detailed note on Frequency division multiplexing.
3. Write a detailed note on Stop and Wait protocol.
4. Explain in detail about ARP.
5. Write a detailed note on SCTP.
6. Write a detailed note on Domain Name Space (DNS) and DDNS.

SECTION-C

7. Write a detailed note on following :

a) Wired LAN

b) Wireless LANs

8. Write a detailed note on Error Detection and Error Correction.
9. Write a detailed note on following :

a) EMAIL

b) WWW

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Total No. of Questions : 18

Total No. of Pages : 02

B.Tech. (CSE) (Sem.–5)

COMPUTER NETWORKS

Subject Code : BTCS 504-18

M.Code : 78323

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

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3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Answer briefly :

1) Define protocols.

2) What is bandwidth in network?

3) What is VLAN and why it is used?

4) What is the use of ALOHA protocol?

5) Differentiate IPV4 with IPV6.

6) Define DHCP.

7) Write the role of FTP.

8) Give the principle of Bluetooth.

9) Discuss UDP Protocol.

10) What is meant by congestion control?

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SECTION-B

11) What is topology and discuss types of topology?

12) Discuss the role of multiplexing in data communication.

13) Write the types of routers. Explain any one in short.

14) Give the basic concept of Cryptography.

15) Discuss Quality of Service improving techniques on transport layer.

SECTION-C

16) Explain the protocols and standards used in OSI Model.

17) What do you mean by error detection and correction? Discuss cyclic redundancy check.

18) Define multiple access protocol. How CSMA/CA protocol is used to avoid the collision in networks?

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