

CSE

FACULTY OF ENGINEERING**B.E. (CSE) VI Semester (AICTE) (Backlog) Examination, March / April 2022****Subject: Computer Networks****Time: 3 hours****Max. Marks: 70****(Missing data, if any, may be suitably assumed)****PART – A****Note: Answer all questions****(10 x 2 = 20 Marks)**

- 1 Define the five components of Data Communication.
- 2 State the difference between Synchronous and Asynchronous Transmission.
- 3 Compare the two types of errors with example.
- 4 State two difference between Pure ALOHA and Slotted ALOHA.
- 5 Identify the IPv4 class, netid and the hostid of the following IP addresses.
 - a) 132 . 56. 8 . 6
 - b) 208 . 34. 54. 12
- 6 Compare circuit switching and packet switching.
- 7 State the services offered by TCP to application layer.
- 8 Define choke packet and what does it indicate.
- 9 State the two types of DNS messages and their purpose.
- 10 Define the purpose of firewall and list the types of firewall.

PART – B**Note: Answer any five questions****(5 x 10 = 50 Marks)**

- 11 a) Summarize the differences between ISO-OSI and TCP/IP reference model.
b) Explain about the different transmission media.
- 12 a) Illustrate the CRC error detection method for the given dataword **1010011110** and the divisor **10111** by computing the codeword.
b) Demonstrate Go-Back-N ARQ protocol with an example.
- 13 a) Compare Virtual Circuit network and Datagram network.
b) Describe IPv4 Classful Addressing.
- 14 a) Distinguish the different scenarios of connection establishment in TCP with proper diagrammatic illustrations.
b) Discuss about the various open-loop congestion control
- 15 a) Distinguish between the two DNS name resolution mechanism with an example.
b) Explain the functions of network management system.
- 16 a) Compare the different topologies for interconnecting devices.
b) Explain the CSMA/CD multiple channel access protocol.
- 17 a) Discuss about ARP protocol.
b) Write notes on Digital Signatures.

CSE

Code No: D-2204/M/BL/AICTE

FACULTY OF ENGINEERING
B.E. (CSE) VI Semester (AICTE) (Main & Backlog) Examination
September/ October - 2022

Subject: Computer Networks

Time: 3 Hours

Max. Marks: 70

(Missing data, if any, may be suitably assumed)

PART - A

Note: Answer all the questions.

(10 x 2 = 20 Marks)

1. What are the two types of line configuration?
2. In what situation multiplexing is used?
3. Classify the responsibilities of data link layer.
4. Define single bit error and burst bit error.
5. What is meant by piggybacking?
6. How errors are detected using CRC?
7. What are the fields on which the UDP checksum is calculated? Why?
8. List the services provided by end-to-end services.
9. Define the two types of user agents in the electronic mail system.
10. Distinguish active and passive attack with example.

PART - B

Note: Answer any five questions.

(5 x 10 = 50 Marks)

11. (a) Compare and contrast OSI model with TCP/IP model.
(b) Distinguish between TDM and FDM.
12. (a) Explain in detail the error detection and error corrections.
(b) Demonstrate sliding window protocol for data link layer.
13. (a) Write a short notes on packet switching and circuit switching.
(b) Is the format of a RARP request packet is same as that of ARP request packet? Justify.
14. (a) Explain the TCP transmission policy with the help of a neat diagram.
(b) Describe about congestion control in frame relay.
15. (a) Discuss how simple mail transfer protocol (SMTP) works? Can multimedia messages be transmitted using SMTP?
(b) Identify the possible threats for RSA algorithm and list their counter measures.
16. (a) Mention the strengths and weakness of Data Encryption Standard (DES) algorithm.
(b) Explain the transport layer connection management.
17. Write short notes on:
 - (a) Bluetooth
 - (b) DHCP
 - (c) Subnetting

FACULTY OF ENGINEERING
BE VI - Semester (CSE) (CBCS) (Backlog) Examination, March / April 2021

Subject: Computer Networks & Programming

Time: 2 Hours

Max .Marks: 70

Note: Missing data, if any, may be suitably assumed

PART – A

(5x2=10 Marks)

Answer any five questions.

- 1 Define Socket.
- 2 Differentiate between TCP and UDP.
- 3 What are the services of Transport layer? .
- 4 What is an IP address?
- 5 List the applications of UDP.
- 6 What do you mean by DNS?
- 7 What common software problems lead to network defects?
- 8 What is a Gateway?
- 9 How many layers are there in the OSI model? Name them.
- 10 Differentiate between static IP addressing and dynamic IP addressing.

PART – B

(4x15= 60 Marks)

Answer any four questions.

- 11 (a) What are the functions of the network layer? List out the design issues in it
 (b) Explain about the key design issues in network layer
- 12 Explain the different IP address classes in detail
- 13 (a) Discuss the TCP service model
 (b) Draw the UDP segment header format and explain its various fields
- 14 (a) Discuss the DNS name space
 (b) Explain the SMTP and MIME
- 15 (a) Explain the socket address?
 (b) Discuss the asynchronous I/O?
- 16 (a) What is congestion control? Discuss the general principles?
 (b) Discuss the congestion control in virtual circuit?
- 17 Write notes on:
 (a) Quality of Service (QOS)
 (b) Load shedding

FACULTY OF ENGINEERING

B.E. VI – Semester (AICTE) (CSE) (Main) Examination, October 2021

Subject: Computer Networks

Max marks: 70

Time: 2 Hours

Missing data, if any, may be suitably assumed

PART – A

(5x2=10 Marks)

Note: Answer any five questions.

1. State the difference between Protocol and Service
2. List the different addresses in TCP/IP protocol and the layers they correspond to
3. Define Hamming distance. Compute the Hamming distance between the words 10101 and 11011.
4. State the differences between 1-persistent, non-persistent and p-persistent CSMA protocols.
5. Translate the following IPv4 addresses into Dotted Decimal notation and tell the IPv4 class to which they belong.
 - a) 01111111 11110000 01100111 01111101
 - b) 11101111 11110111 11000111 00011101
6. State the purpose of Tunnelling
7. What are the elements of transport layer?
8. Define the four flow characteristics
9. Define the purpose of MIME
10. State the five services provided by Network Security

PART - B

(4x15=60Marks)

Note: Answer any four questions.

11. a) Explain the ISO-OSI reference model layer functions with a neat diagram.
b) Compare the two TDM multiplexing techniques with example
12. a) Use the CHECKSUM method for error detection to calculate the checksum for the following for the following five 4-bit datawords (7,11,12,0,6) sent by a sender to receiver
b) Distinguish between Go-Back-N and Selective – Repeat ARQ protocols.
13. a) Explain the IPv4 Header with the help of a neat diagram. State two differences IPv6 has in comparison to IPv4
b) Explain Distance Vector Routing algorithm with a suitable example
14. a) Discuss the purpose of various fields of the TCP segment header.
b) Explain the Leaky Bucket mechanism used for traffic shaping and how it differs from token bucket.

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- a) Write short note on DNS.
 - b) Explain RSA public key encryption algorithm with a suitable example
16. a) Compare the different XDSL types
- b) Discuss CSMA/CD multiple channel access protocol
17. a) Write about Open Shortest Path First gateway protocol
- b) Differentiate between SMTP, POP3 and IMAP protocols.

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