CMR TECHNICAL CAMPUS

UGC AUTONOMOUS

B. Tech. V Semester Regular End Examinations, Dec-2022

Computer Networks Common to CSE, IT, CSM & CSD

Time: 3 Hours

Max. Marks: 70

5

CO3

L2

Note

- i. This Question paper contains Part- A and Part- B.
- ii. All the Questions in Part A are to be answered compulsorily.

Difference between Broadcast & Multicast routing

iii. All Questions from Part B are to be answered with internal choice among them.

PART-A

| | | | $10 \times 02 =$ | S | |
|----|--------|--|-------------------|------------|----------|
| | | • | Marks | CO | BL |
| 1. | a b | Define computer network. What are its advantages? Write various services provided by session layer of OSI model. | 2 2 | CO1 CO1 | L1 L1 |
| | c d | Classify various Data Link Layer Services. Define Bit stuffing. | 2 2 | CO2 CO2 | L2 L1 |
| | e f | What is Congestion control. Write are the different parameters for measuring quality of service? | 2 2 | CO3 CO3 | L1 L1 |
| | g h | Define IP address and port number. What are the fields that are present in the UDP header? | 2 2 | CO4 CO4 | L1 L1 |
| | i j | List the protocols used in Application Layer. What is POP in an email system? | 2 2 | CO5 CO5 | L1 L1 |
| | | PART- B | | | |
| | | | $5 \times 10 = 5$ | 50 Marks | |
| | | • | Marks | CO | BL |
| 2. | | Explain in detail about TCP/IP Protocol suite with neat diagram. | 10 | CO1 | L2 |
| 3 | a | OR Discuss in detail about Fiber optics guided media for transmission. | 5 | CO1 | L3 |
| | b | Write short notes on Radio Transmission. | 5 | CO1 | L2 |
| 4 | a | Given the generator polynomial x^3+1 and data polynomial x^7+1 . Test the error if any using CRC method. | 5 | CO2 | L5 |
| | Ъ | Describe the design procedure for Stop-and-Wait protocol. OR | 5 | CO2 | L2 |
| 5 | a b | Explain in detail Go Back N sliding window protocols. Discuss in detail about slotted ALOHA. | 5 5 | CO2 CO2 | L2 L3 |
| 6 | a b | Illustrate Shortest Path Algorithm with an example. Difference between Broadcast & Multicast routing | 5 | CO3 | L2 |

| Subject Code: 20CS502PC | SET-I | HT NO: |
|-------------------------|-------|--------|
| algorithms. | | |

| | | - Bottomia. | | *Q_ | |
|----|--------|--|--------|------------|--------------------------------|
| 7 | а | Describe about anon la constant | | | |
| | b | Describe about open loop in congestion control Algorithm. Explain Flooding technique. | 5 5 | CO3 CO3 | |
| 8 | a | Explain the services provided by transport layer to upper layers. | 5 | CO4 | L2 |
| | Ъ | With the help of a diagram explain the IPv4 header format. | 5 | CO4 | L2 |
| 9 | | OR With the help of diagrams, explain the three-way handshake methods of TCP connection establishment and release. | 10 | CO4 | L3 |
| 10 | a b | Discuss the working principle behind DNS? Summarize the request message format in HTTP. | 5 5 | CO5 | L2 |
| 11 | a | What are the functions of user agent message transfer and | Ū | CO5 | L2 |
| | ь | and message access agent in e-mail system. Explain SNMP Protocol with a neat diagram. | 5 | CO5 | $\stackrel{\text{L2}}{\smile}$ |
| | | and the characteristics. | 5 | CO5 | L2 |

: Course Outcomes \mathbf{CO}

: Bloom's Taxonomy Levels L 1: Remembering
L 3: Applying
L 5: Evaluating BL

L 2: Understanding L 4: Analysing L 6: Creating

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i. This Ouestion paper contains Part- A and Part- B.

ii. All the Questions in Part A are to be answered compulsorily.

iii. All Questions from Part B are to be answered with internal choice among them.

| | PART-A | 10 X 02 = | 20 Mark | 3 |
|-----------|---|---|------------|-----------|
| | et e | Marks | co | BL |
| 1. a | Define computer network. What are its advantages? Write various services provided by session layer of OSI model. | 2 2 | CO1 | L1 L1 |
| 3 | Classify various Data Link Layer Services. Define Bit stuffing. | 2 2 | CO2 CO2 | L2 L1 |
| e ſ | What is Congestion control. Write are the different parameters for measuring quality of service? | 2 2 | CO3 | L1 L1 |
| e i. h | Define IP address and port number. What are the fields that are present in the UDP header? | 2 2 | CO4 CO4 | L1 L1 |
| | List the protocols used in Application Layer. What is POP in an email system? | ↑ 2 2. | CO5 CO5 | L1 L1 |
| | PART B | 5 X 10 = 5 | û Marke | |
| | | Marks | CO | aL. |
| 2. | Explain in detail about TCP/IP Protocol suite with next diagram. | | CO1 | L2 |
| 2 | Discuss in detail about Fiber optics guided media for transmission. | . . | COl | L3 |
| | Write short notes on Radio Transmission. | S | COI | L2 |
| | Given the generator polynomial x^3+1 and data polynomial x^2+1 . Test the error if any using CRC method. | 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | CO2 | 1.5 |
| | Describe the despension example for Stop-and-Wait protocol, | 5 | _ CO2 | L2 |
| | Spilandra de la Gressic e Ralliane vendow protocella. Jegun erast de Roma l'ariente a Collegna de l'ariente | 1914 51 157 25 | CO2 | 12 113 |
| | Prophilitary Valuation of the file of the | | 26164 | |

| Subject Co | ode: | 20CS502PC SET-1 HT NO: 2 C | 7 R1 | A 6 6 | |
|------------|-------------------------------------|---|------|-------|--------|
| Ì | | algorithms. | 5 | CO3 | L2 |
| 7 | a b | Describe about open loop in congestion control Algorithm. Explain Flooding technique. | 5 | CO3 | L2 |
| 8 | ù . | Explain the services provided by transport layer to upper | 5 | CO4 | L2 |
| . | a L | layers. With the help of a diagram explain the IPv4 header format. | 5 | CO4 | L2 |
| • | b | OR | | CO4 | 12 ** |
| - 9 | 5, b 15, 5, b 15, 25, 4, 5 | With the help of diagrams, explain the three-way handshake methods of TCP connection establishment and release. | 10 | CO4 | |
| | | | 5 | CO5 | L2 |
| 10 | a b | Discuss the working principle behind DNS? Summarize the request message format in HTTP. | 5 | COS | I.2. 1 |
| | | What are the functions of user agent, message transfer agent | 5 | CO5 | · L2 |
| | Ь | and message access agent in e-mail system. Explain SNMP Protocol with a neat diagram. | 5 | CO5 | 1.2 |
| | . | | | | |
| | | | | | |

CO: Course Outcomes

BL: Bloom's Taxonomy Levels L 1: Remembering

L 3: Applying

L 5: Evaluating

L 2: Understanding L 4: Analysing L 6: Creating