



RAN - 2111040101040002

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MCA. (Sem. - I) Examination April - 2025

Computer Network (Paper - 104)

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions

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નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

MCA. (Sem. - I)

Name of the Subject :

Computer Network (Paper - 104)

Subject Code No.: **2111040101040002**

Seat No.:

Student's Signature

Q.1 Do as Directed: 14

- A. Define: TCP/IP. Explain services provided by each of its layers. 07
- B. Write a note on Time-Division Multiplexing. 05

OR

- B. Explain how data is transferred through the Internet?
- C. Which are channels of ISDN? 02

Q.2 Do as Directed: 14

- A. Give the limitations of the stop-and-wait. How it is solved by Go-back-N and Selective Repeat ARQ? 07
- B. Explain Checksum method using proper example. 05

OR

- B. Explain any one controlled access method.
- C. What is the use of Redundancy bits in error control? 02

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| Q.3 | Do as Directed: | 14 |
| A. | Explain Dijkstra's routing algorithm using proper example. | 07 |
| B. | Compare: Connection-oriented with Connection less service. | 05 |
| OR | | |
| B. | Compare class A, B and Class C IPv 4 address. | |
| C. | What is congestion control? | 02 |
| Q.4 | Do as Directed: | 14 |
| A. | Write a note on RSA. | 07 |
| B. | Explain keyed transposition cipher using proper example. | 05 |
| OR | | |
| B. | Explain poly alphabetic substitution using example. | |
| C. | What is S-Box? | 02 |
| Q.5 | Do as Directed: | 14 |
| A. | What happens when the website address is entered into the web browser? | 07 |
| B. | Explain the importance of user agent, message transfer agent and SMTP Protocol in the email. | 05 |
| OR | | |
| B. | List and explain services provided by application layer. | |
| C. | What is FTP and HTTP? | 02 |