

Q. P. Code: 08225

(Time: 2 $\frac{1}{2}$ hours)

[Marks: 75]

Please check whether you have got the right question paper.

- N. B.: (1) **All** questions are **compulsory**.
(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary**.
(6) Use of **Non-programmable** calculator is **allowed**.

1. . **Attempt any two of the following:** 10
- What are the special addresses used in IPV4?
 - How is IPv4 implemented over ATM networks? Explain.
 - Compare IPv4 protocol and IPv6 protocol with respect to their headers.
 - How is the address space allocated for IPv6 addresses?
2. **Attempt any two of the following:** 10
- Explain the Distance Vector algorithm used in Routing Information Protocol
 - Explain the phases for Mobile IP communication.
 - Explain the error reporting messages in ICMP.
 - Write a note on ATMARP.
3. **Attempt any two of the following:** 10
- Explain the server state transition diagram for TCP.
 - Explain the TCP timers.
 - State and explain the UDP services.
 - Explain the UDP applications with respect to connection, error control with examples.
4. **Attempt any two of the following:** 10
- Explain the DHCP client transition diagram.
 - Explain recursive resolution and iterative resolution used in Domain Name Service.
 - Explain the services provided by Stream Control Transmission Protocol.
 - How does Stream Control Transmission Protocol manage flow control?
5. **Attempt any two of the following:** 10
- Explain the data formatting commands and the port defining commands in FTP
 - Explain the following terms: - Dynamic document, Static document, hypertext, hypermedia, uniform resource locator.
 - Write a note on: - HTTP
 - State and explain the different TFTP messages.

[TURN OVER]

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6. Attempt any two of the following: 10
- a. What is Simple Mail Transfer Protocol? Explain the scenario where both the sender and receiver are connected to the web servers via Lan or Wan.
 - b. Explain POP3 and IMAP4.
 - c. Explain the four approaches to streaming stored audio/video.
 - d. Write a note on: - Real-Time Transport Control Protocol
7. Attempt any three of the following: 15
- a. Explain the functions of the user support layers of the OSI model.
 - b. Explain the Link State Routing used in Open Shortest Path First Protocol.
 - c. How does TCP handle congestion?
 - d. Explain the following used in Domain Name Service: - Partially Qualified Domain Name, Label, Zone, Root Server, Primary Server
 - e. State and explain the different kinds of messages used in Border Gateway Protocol.
 - f. Write a note on: - MIME
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