

# CBCS SCHEME

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17CS52

## Fifth Semester B.E. Degree Examination, Jan./Feb. 2023 Computer Networks

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

### Module-1

- 1 a. With general format, explain the HTTP request and response messages. (10 Marks)  
b. With neat diagram, illustrate the basic operation of SMTP. (10 Marks)

OR

- 2 a. Explain recursive queries in DNS with neat diagram. (10 Marks)  
b. With neat diagram, explain DNS message format. (10 Marks)

### Module-2

- 3 a. With general format, explain the various fields of UDP segment. Explain how checksum is calculated. (10 Marks)  
b. With neat diagram, explain the working of rdt 2.0. (10 Marks)

OR

- 4 a. With general format, explain all the field in TCP segments. (10 Marks)  
b. Explain TCP connection management process with neat diagram. (10 Marks)

### Module-3

- 5 a. With a neat diagram, explain the structure of a router. (10 Marks)  
b. Write the link state algorithm and apply it to the following graph to compute shortest path from source node 'A' to all other nodes in the network. [Refer Fig.Q5(b)]

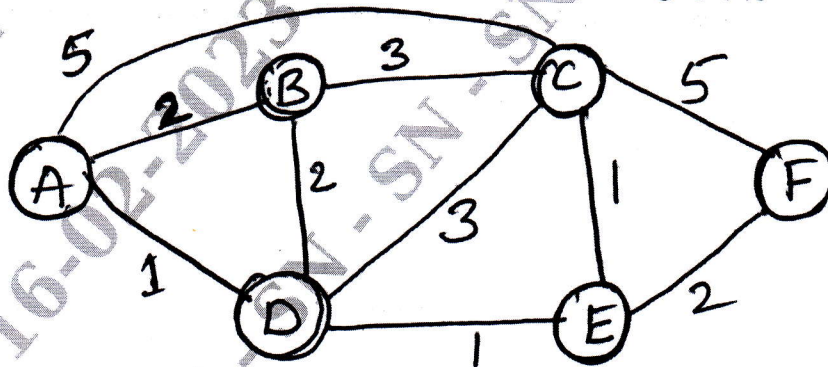


Fig.Q5(b)

(10 Marks)

OR

- 6 a. With general format, explain the various fields of IPV6. (10 Marks)  
b. Explain the intra-AS routing protocol in detail. (10 Marks)

### Module-4

- 7 a. Explain the 3G cellular network architecture with neat diagram. (10 Marks)  
b. Explain the two types of routing approaches to mobile node. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Explain the three phases of mobile IP. (10 Marks)
- b. What is hand off? What are the steps involved in accomplishing handoff? (10 Marks)

**Module-5**

- 9 a. Explain the three different types of streaming stored video. (10 Marks)
- b. Discuss the properties of audio and video. (10 Marks)

OR

- 10 a. Explain the working of CDN. (10 Marks)
- b. What are the classifications in multimedia network applications? Explain. (10 Marks)

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