CBCS SCHEME

USN | | | | | | | | | | |

18CS52

Fifth Semester B.E. Degree Examination, Feb./Mar. 2022
Computer Networks and Security

Time: 3 hrs. Max. Marks: 100

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

Module-1

1 a. Differentiate between :
(i) HTTP and FTP (ii) SMTP and HTTP (iii) UDP and TCP **(10 Marks)**

b. Explain Cookies and Web Caching with diagram. **(10 Marks)**

OR

2 a. Describe in detail the services offered by DNS and explain DNS message format. **(08 Marks)**

b. Compare HTTP and SMTP. **(04 Marks)**

c. Define Socket. Demonstrate the working of TCP-Socket. **(08 Marks)**

Module-2

3 a. With the help of FSM, describe the two states of the sender side and one state of the receiver side of rdt2.0 **(10 Marks)**

b. With a neat diagram, demonstrate the working of Go-BACK-N protocol. **(10 Marks)**

OR

4 a. Describe TCP connection management with help of diagram. **(10 Marks)**

b. Interpret the FSM to TCP congestion control. **(10 Marks)**

Module-3

5 a. Explain the Implementation of virtual circuit services in Computer Network. **(07 Marks)**

b. Explain the three Switching Techniques. **(06 Marks)**

c. Explain Distance vector algorithm using three nodes network. **(07 Marks)**

OR

6 a. Explain Dijkstra's algorithm with example. **(10 Marks)**

b. Explain various broadcast routing algorithms. **(10 Marks)**

Module-4

7 a. Explain Feistel structure of DES Algorithm. **(10 Marks)**

b. Explain RSA Algorithm with an example. **(10 Marks)**

OR

8 a. In the Diffie - Hellman key exchange protocol prove that the two keys k_1 and k_2 are equal. **(10 Marks)**

b. Discuss the following :
(i) Secure Hash Algorithm (ii) Firewalls. **(10 Marks)**

Module-5

9 a. Explain briefly how DNS redirects a users request to a CDN server. **(10 Marks)**

b. With neat diagram explain the naïve-architecture for audio/video streaming. **(10 Marks)**

OR

10 a. Write a short notes on :
(i) Netflix video streaming platform (ii) VOIP with Skype. **(10 Marks)**

b. With neat diagram explain the RTP header fields. **(10 Marks)**

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