CBCS SCHEME

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

18CS52

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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. What are the different transport services available to applications? Explain. **(07 Marks)**

b. Explain HTTP request and response message format. **(08 Marks)**

c. Write a note on FTP and discuss about FTP command and replies. **(05 Marks)**

OR

2 a. What are the steps involved between client and server in order to fetch 10 JPEG images, which are residing in the same server by using non-persistent HTTP connection. The URL for base HTML file is http : //www.xyz.edu/department/base.index. **(07 Marks)**

b. With a neat diagram and explain, explain how DNS server will interact to various DNS server hierarchically. **(05 Marks)**

c. Illustrate how user1 can send mail to user2, and how user2 receives the mail by using SMTP. **(08 Marks)**

Module-2

3 a. How multiplexing and demultiplexing for a connectionless oriented will be performed at transport layer? **(06 Marks)**

b. Describe the various fields of UDP segment and also explain about UDP checksum with an example. **(07 Marks)**

c. Explain how TCP provides a flow control service by using different variables. **(07 Marks)**

OR

4 a. Explain the operation of selective repeat protocol. **(06 Marks)**

b. Explain all the fields in a TCP segment. **(07 Marks)**

c. How TCP connection management is done for three way handshake by the client and server for establishing and closing a connection. Explain. **(07 Marks)**

Module-3

5 a. Explain distance vector algorithm with an example. **(08 Marks)**

b. Explain the three switching techniques in a router. **(06 Marks)**

c. Draw IPV_6 datagram format, mention the significance of each fields. **(06 Marks**

OR

6 a. Explain link state algorithm with an example. **(08 Marks)**

b. Describe the intra-AS routing protocol : RIP in detail. **(06 Marks)**

c. Discuss about uncontrolled flooding and controlled flooding in broadcast routing algorithm. **(06 Marks)**

Module-4

7 a. Classify the different network attacks and explain denial of service attack. (07 Marks)

b. What are the two different techniques used to protect network from attacks? Explain. (07 Marks)

c. Write the steps involved in Data Encryption Standard (DES) along with a diagram. (06 Marks)

OR

8 a. Explain key generation, encryption and decryption phases in RSA algorithm. Illustrate with an example. (07 Marks)

b. Explain the technique involved in Hash function for authentication along with a diagram. (07 Marks)

c. Discuss about packet filtering and proxy server with respect to firewalls. (06 Marks)

Module-5

9 a. What are the classification in multimedia network applications? Explain. (08 Marks)

b. What are the two types of loss anticipation schemes? Explain. (07 Marks)

c. What do you mean by a Jitter and how to remove the Jitter at the receiver for audio by fixed and adaptive play out delay? (05 Marks)

OR

10 a. Explain the working of CDN. (08 Marks)

b. Explain about HTTP streaming in case of streaming stored video. (07 Marks)

c. Discuss about the properties of audio and video in multimedia networking. (05 Marks)

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