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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