CBCS SCHEME

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

17CS52

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020
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. Which protocol can be used for fetching web pager? Explain its working with request and response message formats. **(10 Marks)**

b. Explain the services offered by DNS and also explain the DNS record and massage formal. **(10 Marks)**

OR

2 a. Explain the working FTP along with its commands. **(08 Marks)**

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

c. Illustrate how P2P architecture can be adopted in file. Sharing application like bit torrentz. **(08 Marks)**

Module-2

3 a. Draw and explain the FSM for sender site and receiver site of rdt 2.0 protocol. **(07 Marks)**

b. Explain selective repeat ARQ protocol. **(06 Marks)**

c. Draw TCP segment structure and explain its fields. **(07 Marks)**

OR

4 a. Suppose that two measured sample RTT values are 106ms and 120ms.

i) Compute Estimated RTT after each of these Sample RTT value is obtained. Assume $\alpha = 0.125$ and Estimated RTT is 100ms. Just before first of the samples obtained.

ii) Compute DeVRTT. Assume $\beta = 0.25$ and DeVRTT is 5ms before first of the samples obtained. **(06 Marks)**

b. Explain how connection establishment and termination is handled by TCP. **(07 Marks)**

c. What is congestion in network? Explain how TCP handles congestion. **(07 Marks)**

Module-3

5 a. What is routing? With a neat diagram, explain the structure of a router. **(10 Marks)**

b. Write link state routing algorithm, consider the following network with the indicated link costs. Apply link state routing algorithm to compute the shortest path from 'u' to all other nodes in the network. [Refer Fig.Q5(b)]. **(10 Marks)**

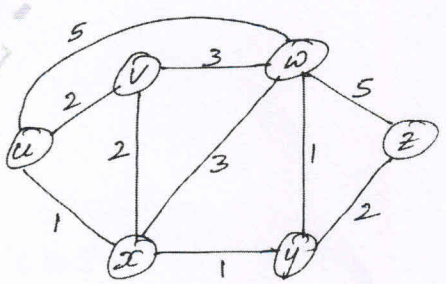

Fig.Q5(b)

OR

6 a. Draw IPV6 datagram format. Explain its fields. **(06 Marks)**
b. Illustrate the working of RIP protocol. **(07 Marks)**
c. List the broadcast routing algorithm. Explain any one of them. **(07 Marks)**

Module-4

7 a. With a neat diagram, explain the components of 3G cellular network architecture. **(10 Marks)**
b. Explain two different types of routing approaches to mobile nodes. **(10 Marks)**

OR

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

Module-5

9 a. Explain three different types of streaming stored video. **(10 Marks)**
b. Explain the working of CDN. **(10 Marks)**

OR

10 a. Describe the leaky bucket policing mechanism. **(06 Marks)**
b. Explain the various packet scheduling mechanism. **(08 Marks)**
c. Explain the properties of Video. **(06 Marks)**

* * * * *