USN

Sixth Semester B.E. Degree Examination, June/July 2023
Computer Networks – II

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions, selecting at least TWO questions from each part.*

PART – A

1 a. Define flooding. Briefly explain the techniques for reducing the duplicate packets in flooding. **(08 Marks)**
   b. Differentiate between connection oriented and connectionless service. **(04 Marks)**
   c. With an example explain Bellman-Ford algorithm for shortest path routing. **(08 Marks)**

2 a. Explain the FIFO and priority queue scheduling for managing traffic at packet level. **(08 Marks)**
   b. Define congestion control with graph. Explain the leaky bucket algorithm for policing the traffic at flow level. **(12 Marks)**

3 a. With a neat diagram explain the TCP/IP protocol suite. **(06 Marks)**
   b. A host in an organization has an IP address 150·32·64·34 and a subnet mask 255·255·240·0. How bits are used to specify the subnet ID? What is the address of this subnet? What is the range of IP addresses that host can have on this subnet? **(08 Marks)**
   c. List the changes from IPv4 to IPv6. **(06 Marks)**

4 a. With a neat diagram, explain the TCP state transition diagram. **(08 Marks)**
   b. Explain in detail, the operation of OSPF (open shortest path first) by considering on example network. **(12 Marks)**

PART - B

5 a. Write a note on only Two :
      i)   Remote login protocols
      ii) File transfer and FTP
      iii) World wide web and HTTP. **(08 Marks)**
   b. Define network management and explain SNMP and SNMP messages. **(06 Marks)**
   c. Compare secret key and public key cryptography systems. **(06 Marks)**

6 a. List the benefits of creating VPN's. Explain VPN types. **(10 Marks)**
   b. Explain need for overlay networks and P2P connection. **(10 Marks)**

7 a. Explain the MPEG standards and frame types for compression. **(06 Marks)**
   b. With an example, explain Huffman encoding for data compression. **(06 Marks)**
   c. With neat diagram explain SIP components. **(08 Marks)**

8 a. List and explain the applications and features of adhoc networks. **(08 Marks)**
   b. Explain the structure of a typical sensor node. **(07 Marks)**
   c. Write short notes on Zigbee technology. **(05 Marks)**

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