[5870] – 1068

T.E. (Electronic & Telecommunication)
COMPUTER NETWORKS
(2019 Pattern) (Semester - I) (304185 (D) (Elective-I)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates:
   1)   Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
   2)   Neat diagrams must be drawn whenver necessary.
   3)   Assume suitable data, if necessary.

Q1) a)   Explain the various performance parameters of network layer.   **[6]**

   b)   Explain the services provided by Network Layer.   **[6]**

   c)   Compare datagram switching and virtual circuit switching   **[6]**

OR

Q2) a)   Explain error reporting messages, informational messages, neighbour
            discovery messages and group membership messages related to ICMPv6.

                                                                                   [6]

   b)   Explain the network id and host id.   **[6]**

   c)   What is the difference between classless addressing and classful
        addressing? Concepts related to IPv4 addresses.   **[6]**

Q3) a)   Explain the unicast routing and multicast routing protocol   **[8]**

   b)   What is routing? Explain the distance vector routing algorithm   **[9]**

OR

Q4) a)   What is routing? Explain the link state routing algorithm   **[8]**

   b)   Explain inter-domain and intra-domain routing.   **[9]**

P.T.O.

Q5) a) Explain TCP Connection establishment, TCP data transfer and TCP connection termination. **[9]**

b) What are the duties of Transport Layer? List the services provided by Transport Layer to upper layers. **[9]**

OR

Q6) a) Waht is congestion control? Explain the leaky bucket algorithm with suitable diagram. **[9]**

b) Draw TCP header and explain function of each field. **[9]**

Q7) a) Explain the DNS in detail. **[8]**

b) Explain the architecture of E-mail. **[9]**

OR

Q8) a) Explain the telnet protocol and FTP Protocol with diagram. **[8]**

b) Explain BOOTP and DHCP Protocol. **[9]**

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