T.E. (COMP) Sem V (R)

Con. 5487–09.   (REVISED COURSE)   SP–8564

(3 Hours)   [Total Marks : 100

Computer Network   16/12/09

2·30 to 5·30

LI6

N.B. 1. Q.1 is Compulsory.

2. Attempt any **Four** out of remaining **Six** Questions.

3. **Figures** to the right indicate **full** marks.

1. a) Explain Stop and wait protocol and sliding window protocol with example and suitable diagram.   10

   b) What is subnet address if the destination address is 198.47.34.31 and subnet mask is 255.255.224.0   05

   c) For message frame 1101011011 and $G(x) = x^4 + x + 1$ show the transmitted frame.   05

2. a) Explain the need for the layered architecture in computer network. Explain how information is exchanged between two nodes using OSI model.   10

   b) Explain framing, flow and error control in Data Link Layer.   10

3. a) What is the purpose of Digital Subscriber Line (DSL)? Explain ADSL.   10

   b) What is the difference in functionalities between a bridge and a repeater? Explain the process of learning in case of transparent bridge.   10

4. a) What is Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA) protocol? Explain with timing diagram.   10

   b) Differentiate between Virtual Circuit and datagram subnets.   10

5. a) What is count to infinity problem in distance vector routing?   10

   b) What are transport service primitives?   10

6. a) How TCP controls the congestion?   10

   b) i) What is Address Resolution Protocol(ARP)?   05

   ii) Explain Classless Inter Domain Routing (CIDR).   05

7. Write notes on: (any **four**)   20

   i)   SONET

   ii)   IEEE 802.11WLAN

   iii)   Berkeley Socket

   iv)   Point-to-Point Protocol(PPP)

   v)   Differentiate between Hub and Switch