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

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

(3 Hours) **[Total Marks : 100**

(216) Computer Network 16/12/09 2:30 to 5:30

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