D-26/2056

COMPUTER NETWORKS – 222
(Semester-IV)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt any two questions from Section A and any two questions from Section B. Question No. IX of Section C is compulsory.

SECTION – A

I. Explain why computer networks have layered structure. 15

II. What are the main uses of computer networks in business? 15

III. Describe the Simplex protocol for a noisy channel. 15

IV. What are the different types of connection-oriented services? 15

SECTION – B

V. Compare Virtual circuit and Datagram subnets. 15

VI. Describe Leaky bucket algorithm/Token bucket algorithm. 15

10622-M/10,010/HHH/697

[P.T.O.]
VII. What are the two Transport layer protocols? Explain any one in detail.  

VIII. Network security problems can be divided roughly into how many types? Explain.  

SECTION - C  
(Compulsory Question)  

IX. Answer the following in brief:  
(a) Give two main characteristics of LANs.  
(b) What is meant by Frames in data link layer?  
(c) Describe the main features of Point-to-point networks.  
(d) What is the advantage of using Simplex stop-and-wait protocol over unrestricted simplex protocol?  
(e) What are the main design issues in datalink layer?  
(f) What is meant by Congestion?  
(g) How routing algorithm is made dynamic?  
(h) Write a brief note on DNS.  
(i) What is meant by one-time pads?  
(j) Is RSA public key algorithm? What is the benefit of using public keys? (1.5 x 10 = 15)