

PC-10622/M

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.

RanbirCollege.eu5.org

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

VII. What are the two Transport layer protocols ? Explain any *one* in detail. 15

VIII. Network security problems can be divided roughly into how many types ? Explain. 15

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 ? (1.5×10=15)