

L-7/2111

COMPUTER NETWORKS

13138/NB

(MS-214)

(Semester-III)

Time : 3 Hours

Max Marks: 70

Note: Attempt five questions in all, selecting two questions each from Section A and Section B and the entire Section C.

SECTION-A

- I. What is OSI model? Explain in detail the functions of each layer of OSI model. (10.5)
- II. What is CSMA? Explain CSMA/CD in detail with binary exponential backoff algorithm. (10.5)
- III. Explain in detail any two internetworking devices. (10.5)
- IV. Write notes on- (10.5)
 - (a) Limited contention protocol
 - (b) Adaptive tree walk protocol

SECTION-B

- V. What is a routing algorithm? What are the desired properties of a routing algorithm? Explain Shortest Path Routing Algorithm. (10.5)
- VI. What does fast ethernet mean? Explain various types of fiber based fast ethernet standards. (10.5)
- VII. What is congestion control? Explain in detail open loop congestion control and closed loop congestion control techniques. (10.5)
- VIII. Define network security? What kind of attacks can be made on data and computer networks? Explain. (10.5)

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SECTION-C

(Compulsory Question)

- IX. Answer all the following questions in brief: (28 Marks)
- (a) Write full form of ALOHA ? (1)
 - (b) Explain ARPANET with diagram. (3)
 - (c) Differentiate between TCP and UDP. (3)
 - (d) What do you mean by MAC sublayer? Explain in brief. (3)
 - (e) Explain Urn protocol. (3)
 - (f) What is FDDI? Explain. (3)
 - (g) What are the causes of congestion control? (3)
 - (h) What is the function of cell phone switching office? (3)
 - (i) What do you mean by digital signatures? Explain. (3)
 - (j) Write short note on SNMP and SMTP. (3)

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