322635(22)

B. E. (Sixth Semester) Examination, 2020

(Old Scheme)

(Computer Science and Engg. Branch)

INTER NETWORKING with TCP/IP

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any two parts from parts (b), (c) and (d) of each question.

1. (a) What do you mean by inter-network?

    (b) Explain the function of ISO-OSI reference model.

    (c) Explain TCP/IP protocol suite.

(d) Explain various switching technology.

2. (a) Define the term protocols as it relates to data communication.

(b) Explain working of IGMP.

(c) Briefly describe the classes of IP addresses with their ranges.

(d) Differentiate between IPv4 vs IPv6.

3. (a) What do you understand by routing.

(b) Explain various types of OSPF message format of OSPF protocol.

(c) Explain RIP protocol with its advantages and disadvantages.

(d) Briefly describe the Multicast Backbone (M-Bone).

4. (a) Compare congestion control and flow control.

(b) Explain leaky bucket algorithm.

(c) Explain the principle of sliding window protocol.

(d) For a host machine the uses the token bucket algorithm for congestion control, the token bucket has a capacity of 1 megabyte and the maximum output rate is 20 megabytes per second. Tokens arrive at a rate to sustain output at a rate of 10 megabytes per second. The token bucket is currently full and the machine needs to send 12 megabytes of data. What will be the minimum time required to transmit the data?

5. (a) Define virtual circuit identifier.

(b) Explain types of ISDN equipment and how the equipment is interconnected to create ISDN networks.

(c) Explain ATM reference Model.

(d) Explain logical subnet concept and connection management.