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53 (CS 815) TIDI

2021

TCP/IP-DESIGN AND IMPLEMENTATION

Paper : CS 815

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** questions.

1. (a) Give reasons for using layer protocols. 10
(b) List the differences and similarities between OSI and TCP/IP reference model. 10
2. Explain main features of the following protocols : 20
 - (i) ICMP
 - (ii) ARP
 - (iii) DHCP
 - (iv) BGP

Contd.

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3. (a) Explain TCP header format. 10
(b) Explain IPv4 header format. 10
4. (a) What is congestion? What are the causes of congestion and how to handle it? 10
(b) Explain bandwidth, throughput, latency and jitter. 10
5. (a) With a neat sketch, explain TCP state transition diagram. 10
(b) Explain SMTP protocol in detail. 10
6. (a) Discuss *any two* routing protocols. 10
(b) Explain sliding window protocol in detail. 10
7. (a) Explain implementation of RPC mechanism. 10
(b) Explain the characteristics of VLAN. 10

