

CA9190 TCP/IP DESIGN AND IMPLEMENTATION

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UNIT I INTRODUCTION

Internetworking concepts and architectural model– classful Internet address – CIDR– Subnetting and Supernetting –ARP– RARP– IP – IP Routing –ICMP – Ipv6.

UNIT II TCP 9

Services – header – connection establishment and termination– interactive data flow– bulk data flow– timeout and retransmission – persist timer – keep alive timer– futures and performance.

UNIT III IP IMPLEMENTATION 9

IP global software organization – routing table– routing algorithms–fragmentation and reassembly– error processing (ICMP) –Multicast Processing (IGMP).

UNIT IV TCP IMPLEMENTATION I 9

Data structure and input processing – transmission control blocks– segment format– comparison–finite state machine implementation–Output processing– mutual exclusion– computing the TCP data length.

UNIT V TCP IMPLEMENTATION II 9

Timers–events and messages– timer process– deleting and inserting timer event– flow control and adaptive retransmission–congestion avoidance and control – urgent data processing and push function.

TOTAL = 45

TEXT BOOKS:

1. Douglas E.Comer, "Internetworking with TCP/IP Principles, Protocols and Architecture", Vol 1 & 2, fourth edition, Pearson Education Asia, 2003.
2. W.Richard Stevens "TCP/IP illustrated" Volume 1 Pearson Education, 2003.

REFERENCES:

1. Forouzan, "TCP/IP protocol suite" Second edition, Tata McGraw Hill, 2003.
2. W.Richard Stevens "TCP/IP illustrated" Volume 2, Pearson Education 2003.