

Q.P. Code : 717901

(3 Hours)

[Total Marks :80

- N.B. :** (1) Question No. 1 compulsory.
(2) Attempt any **three** questions out of remaining **five**.
(3) **Figures** to the **right** indicate **full** marks.
(4) Assume suitable data if required and mention the same in answer sheet.

1. Solve any **four**.

- (a) When web pages are sent out, they are prefix by MIME headers , Why ?
(b) Discuss the three way handshaking in TCP for connection establishment.
(c) Explain Classless Inter Domain Routing (CIDR)
(d) Explain the use of fragmentation in Internet communication.
(e) Explain any one characteristics of RTP in detail.

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2. (a) Explain the transition states of DHCP with a neat diagram.
(b) Distinguish between OSI model and TCP/IP model .

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- 3 (a) Explain congestion control mechanism in TCP.
(b) Explain the different error reporting messages in ICMP with message format.

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- 4 (a) The following is a dump of a TCP header in hexadecimal format.

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```
05320017 00000000 00000000 500207FF 00000000
```

- (i) What is the source port number?
(ii) What is the destination port number?
(iii) What is Sequence number?
(iv) What is the acknowledgement number?
(v) What is the length of the header?
(vi) What is the type of the segment?
(vii) What is the window size?

- (b) An ISP is granted a block of addresses starting with 190.100.0.0/16 (65,536 addresses). The ISP needs to distribute these addresses to three groups of customers as follows :

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- (a) The first group has 64 customers; each needs 256 addresses.
(b) The second group has 128 customers ; each needs 128 addresses.
(c) The third group has 128 customers ; each needs 64 addresses.

Design the sub blocks and find out how many addresses are still available after these allocations .

TURN OVER

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5. (a) What is RTCP? Where it is used? Discuss different messages used in RTCP. **10**
(b) Explain in detail the architecture of H 323. **10**
6. (a) What is the need of digitizing of Audio and Video in Internet communication? **10**
Explain Video Compression (MPEG) in detail.
(b) Explain the resource record format of DNS. **10**
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