

- (f) What is the purpose of Proxy Server ? How does it work ?
 - (g) What is Domain Name System (DNS) ?
 - (h) What is the use of Reverse ARP ?
 - (i) In OSI network architecture, the routing is performed by which layer ?
 - (j) What do you mean by "Subnet Masks" ?
2. (a) Why is IP called 'Best effort delivery' protocol ? Draw IP datagram and explain the fragmentation offset field. 5
- (b) What is Multicast Addressing ? Describe the working principle of transport gateway. 5
3. (a) Explain how IP and mask are encoded in BGP message format. 5
- (b) Write the basic principle of Internet Control Message Protocol. What are its basic functions ? 5

4. (a) In case a Subnet mask : 255.255.255.0 is used in a LAN, how many bits are used as network address, and in host address ? What are the maximum numbers of hosts that can be accommodated in such a case ? 5
- (b) What is the difference between Static and Dynamic Routing ? Why is subnetting done in a typical LAN ? 5
5. (a) How do two machines establish communication via TCP ? Explain the Handshaking process in detail. 5
- (b) What is firewall ? Discuss each types of firewall briefly. 5
6. (a) The TCP/IP standard defines how many layers ? Briefly explain each of them. 5
- (b) What are the different data units (input and output) at different layers of TCP/IP protocol suite ? 5

7. What is Broadband Communication? How is it different from Dial up Connections? 10

8. Write short notes on any two of the following :

5 + 5

(i) TCP timeout

(ii) RARP Packet format

(iii) ICMP

(iv) TELNET.

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|-------------|----------|
| O - 90 & Ab | D - 35 & |
| E - 80 & Ab | F - 25 & |
| A - 70 & Ab | 35 |
| B - 60 & Ab | |
| C - 50 & Ab | |

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MCA-5th

Internet and Web Technology

Full Marks : 70

Time : 3 hours

Answer any six questions, including Q.No.1 which is compulsory

The figures in the right-hand margin indicate marks

1. Answer all the questions : 2 x 10

- (a) Which IP address is called as "Loop back address"?
- (b) What is meant by "tunnelling"?
- (c) Discuss the concept of subnet addressing.
- (d) Differentiate between connection oriented and connectionless delivery systems.
- (e) What is meant by Port Number?