Total No. of Questions : 12]

SEAT No. :

P2347

[Total No. of Pages :3

[4758] - 85
T.E. (Computer Engineering)
COMPUTER NETWORKS
(2008 Pattern) (Semester - II)

Time :3 Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) ***Answers 03 questions from each section.***
2) ***Answers to the two sections should be written in separate answer -books.***
3) ***Neat diagrams must be drawn whenever necessary.***
4) ***Figures to the right indicate full marks.***
5) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) Consider you are accessing a web page. Explain what different things happen at client and server side, at each layer. Assume that both are using TCP/IP protocol stack. **[8]**

b) What is the difference between persistent and non persistent HTTP? Also explain HTTP message format. **[8]**

OR

Q2) a) What is internet? Explain protocol layers & service model in The Internet in detail. **[8]**

b) Compare file transfer using FTP and HTTP methods. **[8]**

Q3) a) Explain connection oriented and connection-less service. Which protocols at each layer in TCP/IP protocol stack supports these services? **[9]**

b) Explain significance of following flags in TCP header SYN, RST, FIN, PSH. **[9]**

OR

P.T.O.

Q4) a) What is socket? List and explain various socket primitives required in TCP socket program on client and server side. **[9]**

b) Differentiate between TCP and UDP protocol. Also comment on the applications supported by them. **[9]**

Q5) a) Explain significance and working of RSVP protocol. **[8]**

b) What is QoS? Explain it with respect to reliability, delay, jitter and bit rate. **[8]**

OR

Q6) a) Describe in brief Integrated Services and Differentiated services. **[8]**

b) What is traffic shaping? How is it used in congestion control? **[8]**

SECTION- II

Q7) a) Compare IPv4 and IPv6. Draw and Explain IPv6 header format. **[8]**

b) Explain network layer design issues. **[8]**

OR

Q8) a) Compare IP and ICMP. Explain header format of ICMP V6 protocol. **[8]**

b) Identify class, subnet mask, network address and broadcast address of following IP addresses: **[8]**

i) 214.25.6.3

ii) 191.5.8.9.

iii) 5.6.45.4

iv) 230.45.89.63

Q9) a) Explain Distance Vector Routing. What are the advantages and disadvantages of DVR? **[8]**

b) Explain RIP and OSPF in details. **[8]**

OR

Q10)a) Classify routing algorithms. Also compare link state and distance vector routing. **[8]**

b) Describe in brief ICMP messages. **[8]**

Q11)a) Explain the following internetworking devices. **[6]**

i) Switches

ii) Routers

b) What is PPP? Explain with transition state diagram. **[6]**

c) Explain the working of PPP. Is it based closely on HDLC which uses bit stuffing to prevent accidental flag bytes within the payload from causing confusion? Give the reason why PPP uses character stuffing instead. **[6]**

OR

Q12)a) Explain working of MPLS. **[6]**

b) Explain the HDLC protocol with its frame format. **[6]**

c) Compare and contrast between HDLC and PPP. **[6]**

☼ ☼ ☼