Total No. of Questions :12]

SEAT No. :

P1669

[Total No. of Pages :3

[5058] - 157

T.E. (Computer Engineering)

COMPUTER NETWORKS

(2008 Course) (Semester - II) (310250)

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

Instructions to the candidates:

1) ***Answer 03 questions from Section I and 03 questions from Section II.***
2) ***Answers to the two sections should be written in separate books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***
5) ***Assume suitable data, if necessary.***

SECTION - I

Q1) a) List advantages and disadvantages of having international standards for network protocols? **[8]**

b) Why does ATM use small, fixed length cells? **[8]**

OR

Q2) a) Discuss Domain Name system. **[8]**

b) Write a note on TELNET. **[8]**

Q3) a) What is congestion? How it can be tackled using various algorithms. Discuss. **[6]**

b) Discuss TCP header. How TCP/IP model is different than ISO-OSI model. **[6]**

c) Explain transactional TCP. How it is different from stream control transmission protocol. **[6]**

OR

P.T.O.

Q4) a) Why does the maximum packet lifetime, 'T', have to be large enough. Explain. **[4]**

b) Discuss advantages and disadvantages of credits versus sliding window protocol. **[6]**

c) Discuss TCP connection management modelling in detail. Discuss advantages and disadvantages of Nagle's algorithm in case of congestion. **[8]**

Q5) a) Discuss QoS in network management? How the QoS can be maintained. **[8]**

b) What is scheduling? Discuss any two scheduling techniques in detail. **[8]**

OR

Q6) a) Discuss integrated services in detail. **[8]**

b) Discuss Token - bucket algorithm. How it is better than leaky bucket? **[8]**

SECTION - II

Q7) a) What is concatenated virtual circuit? Explain with suitable example? **[8]**

b) Discuss Tunneling as a part of connecting different Networks. **[8]**

OR

Q8) a) A network on the internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts it can handle? Justify. **[4]**

b) What are the different ways with which the network can differ? **[6]**

c) Discuss Classless Inter Domain Routing (CIDR). **[6]**

Q9) a) What are the major classes of Routing algorithms? Discuss in detail. **[6]**

b) Discuss shortest path routing. **[6]**

c) Discuss Border Gateway Protocol (BGP). **[6]**

OR

Q10)a) Elaborate Multiple Access with Collision Avoidance (MACA) and MACAW. **[8]**

b) Discuss and compare distance vector Algorithm with link state routing. **[4]**

c) Explain IPV_6 internet protocol. **[6]**

Q11)a) Explain **[8]**

i) MPLS

ii) ATM

b) Write short note on PPP protocols. **[8]**

OR

Q12)a) Explain High-level Data link control protocol with its frame format. **[8]**

b) What do you mean by networking devices? What are they? Enlist and explain. **[8]**