

Total No. of Questions : 12]

SEAT No. :

**P829**

[Total No. of Pages :2

**[4659] - 88**  
**B.E. (E & TC)**  
**COMPUTER NETWORK**  
**(2008 Course) (Semester - I)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:*

- 1) *Answer any three questions from each section.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

**SECTION - I**

- Q1)** a) Explain TCP/IP reference model with suitable diagram. Compare OSI reference model with TCP/IP. **[10]**
- b) Give classification of transmission media. Explain any two guided transmission media. **[8]**

OR

- Q2)** a) Explain cable TV network. How cable TV network is used for data transmission with neat diagram. **[10]**
- b) Explain the terms ADSL, VDSL, HDSL and SDSL technology. **[8]**

OR

- Q3)** a) Explain simplest protocol and stop & wait ARQ protocol for noiseless channels with suitable diagram. **[8]**
- b) What are the different types of multiple access protocols? Explain controlled access protocol. **[8]**

OR

- Q4)** a) What are the common standard Ethernet implementations? Explain. **[8]**
- b) What are the different functions of data link layer? Explain different types of framing techniques in detail. **[8]**
- Q5)** a) Draw the layer architecture and explain the functions of each layer in Bluetooth. **[8]**
- b) What is backbone network? What are the types of backbone networks? Explain in detail. **[8]**

**P.T.O.**

- Q6)** a) What is virtual LAN? Explain VLAN with suitable diagram. [8]  
b) Draw the layer architecture and explain in detail the function of each ATM layer. [8]

**SECTION - II**

- Q7)** a) For a given Classful IP address, how will you extract network address and host address? Explain with suitable example? [8]  
b) Explain in details ARP, RARP and BOOTP? [8]

OR

- Q8)** a) What is connecting devices? Explain, compare hub & switch. [8]  
b) What are advantages of ICMP over IP protocol? Explain ICMP with general frame format. [8]

- Q9)** a) What are the main objectives of transport layer? Explain with neat diagram process to process delivery in transport layer. [8]  
b) Compare TCP and UDP. Under what circumstances you will use them? [8]

OR

- Q10)** a) List the various open loop and closed loop congestion control techniques. Explain the policies that can prevent the congestion in a network. [8]  
b) List the typical QoS parameters in the Transport Layer and explain each one. [8]

**Q11)** Write a short note on [18]

- a) Role of SMTP & POP - 3 server in E-mail.  
b) DNS  
c) FTP

OR

- Q12)** a) What are the main responsibilities of Application layer? Explain in brief. [9]  
b) How symmetric key & public key is used in cryptography. [9]

