

Total No. of Questions : 10]

SEAT No. :

**P2427**

**[4758] - 598**

[Total No. of Pages :2

**T.E. (I.T.)**

**COMPUTER NETWORK TECHNOLOGY**

**(2012 Course) (End - Sem.) (Semester - I)**

*Time : 2.30 Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Neat diagrams must be drawn wherever necessary.*
- 2) Figures to the right indicate full marks.*
- 3) Your answers will be valued as a whole.*
- 4) Assume suitable data, if necessary.*

**Q1) a)** What is the significance of ARP and RARP Protocols? **[6]**

b) Explain operation of ICMP with suitable example. **[4]**

OR

**Q2) a)** For a given class B network 144.155.0.0 with default subnet mask, how can you divide it into 8 subnets? Write the **[6]**

- i) range of each subnet
- ii) network IP for 7<sup>th</sup> subnet
- iii) broadcast IP for the 7<sup>th</sup> subnet
- iv) subnet mask in subnets.

b) What is silly window syndrome problem. **[4]**

**Q3) a)** Describe 3-way handshake for connection establishment in TCP. **[6]**

b) Explain email architecture & its services. **[4]**

OR

**Q4) a)** What is FTP? Where & when is it used? Why does it require two ports. **[6]**

b) Describe SMTP header format. **[4]**

**P.T.O.**

- Q5)** a) Explain architecture of 802.11. [10]  
b) Describe bluetooth protocol stack. [8]

OR

- Q6)** a) Explain in detail architecture of Bluetooth. [10]  
b) What are different technical issues to implement WLAN? [8]

- Q7)** a) Explain different design constraints of WSN. [8]  
b) Explain the difference between Pure ALOHA & slotted ALOHA. [8]

OR

- Q8)** a) Which are different task & characteristics of transceiver? [8]  
b) What are different design issues of MAC protocol of WSN? [8]

- Q9)** a) Differentiate between content based & geographic routing. [8]  
b) Describe SPIN routing protocol. [8]

OR

- Q10)** Write short note on (Any two): [16]  
a) Addressing in WSN.  
b) 100 Gigabit Ethernet.  
c) Software defined networking.

