

Total No. of Questions : 10]

SEAT No. :

P1355

[Total No. of Pages : 2

[4858] - 1103

**T.E. (Information Technology) (Semester - I)**

**End Semester Examination**

**COMPUTER NETWORK TECHNOLOGY**

**(2012 Pattern)**

*Time : 3 Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Assume suitable data if necessary.*

**Q1)** a) How token bucket algorithm works in case of smooth and bursty traffic. [6]

b) What is classless addressing? Explain. [4]

OR

**Q2)** a) Differentiate between IPv4 and IPv6. [4]

b) A company is assigned site address 140.55.0.0. The company needs 1000 IP address. Find the no. of subnet and range of IP address of each subnet. [6]

**Q3)** a) State the ICMP message format and list ICMP message types. [6]

b) Explain Mobile IP. [4]

OR

**Q4)** a) Explain working of DHCP with transition diagram. [6]

b) How to overcome the problems in RIP? [4]

**Q5)** a) Write characteristics of radio propagation and propagation impairments. [8]

b) Explain Bluetooth architecture and its protocol stack. [10]

OR

*P.T.O.*

- Q6)** a) Write short note on : (any two) [10]  
i) LEACH  
ii) AODV  
iii) DSR  
b) Explain IEEE 802.11 FHSS and DSSS. [8]

- Q7)** a) Explain the basic architecture of WLAN and discuss various components in it. [8]  
b) Discuss naming and addressing in wireless sensor network. [8]

OR

- Q8)** a) State different MAC protocols in sensor network? Explain S-MAC in detail. [8]  
b) What are different design issues and challenges of wireless sensor network? [8]

- Q9)** a) Explain in detail CSMA/CA. [8]  
b) Differentiate between content based and geographic routing. [8]

OR

- Q10)** a) Explain SPIN routing protocol for WSN. [8]  
b) What are the advantages and disadvantages of BYOD? [8]

