Total No. of Questions : 10]

SEAT No. :

**P3829**

[Total No. of Pages : 2

# [5561]-250

## B.E. (Electronics & Telecommunication)

## COMPUTER NETWORKS

## (2012 Pattern) (Semester - I) (404182)

*Time : 2½ Hours]* *[Max. Marks : 70*

***Instructions to the candidates:***

1) ***Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Use of calculator is allowed.***
5) ***Assume suitable data, if necessary.***

***Q1)*** a) Draw TCP/IP protocol suite. List with example addresses present at every layer. **[6]**

b) Compare circuit switching and packet switching network. **[4]**

OR

***Q2)*** a) Draw the HDLC frame format. Write function of each field. **[6]**

b) Explain the fast Ethernet networks. **[4]**

***Q3)*** a) What is IEEE 802.11? Explain wireless LAN in brief. **[6]**

b) Compare Bluetooth with Zigbee? **[4]**

OR

***Q4)*** a) Write short notes on : **[6]**

i) Gateway.

ii) Hub.

iii) Routers.

b) What is VLAN? How it is work? **[4]**

***P.T.O.***

***Q5)*** a) List the various protocols giving their significance at network layer. **[9]**

b) Explain the various classes of IP addressing with their respective ranges. Also list the range of private IP addresses. **[8]**

OR

***Q6)*** a) Give the classification of commonly used Unicast Routing protocols and explain Distance Vector Routing protocol with an appropriate example. **[9]**

b) With the help of diagram explain IPv4 header format in detail. **[8]**

***Q7)*** a) What are the duties of transport layer? List the services provided by transport layer to upper layers. **[8]**

b) Explain connection establishment and connection releasing with respect to transport layer. **[5]**

c) What is socket address? Explain. **[4]**

OR

***Q8)*** a) Draw the TCP header, Explain the function of each field. **[8]**

b) Explain QoS at transport layer, Also write about transport layer service primitives. **[9]**

***Q9)*** a) Explain : FTP and Telnet protocols. **[6]**

b) What is DNS? Explain the components of DNS system. **[6]**

c) What is URL and what are its component. **[4]**

OR

***Q10)***a) What are the main responsibilities of Application layer? Explain in brief. **[6]**

b) Explain the RSA algorithm. **[6]**

c) Write short note on electronic mail system. **[4]**