	Unech
Name:	
Roll No.:	To Committy and Explana
Invigilator's Signature :	•••••

CS/B.TECH(ICE-EIE(O)/SEM-6/CS-611/2011 2011

COMPUTER NETWORK AND INTERNETWORKING

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

(Multiple Choice Type Questions)

1.	Choose the	correct	alternatives	tor	the	following	ng	:
----	------------	---------	--------------	-----	-----	-----------	----	---

 $10 \times 1 = 10$

- i) Which one is a UNIX command to check your IP?
 - a) ip

- b) ipconfig
- c) ifconfig
- d) showip.
- ii) Which one is a DCE device?
 - a) Modem
- b) Computer
- c) Network Card
- d) None of these.
- iii) How many links are required for a fully connected ring topology consisting of n nodes
 - a) n(n-1)
- b) *n*
- c) n(n-1)/2
- d) n 1.

6207 [Turn over

CS/B.TECH(ICE-EIE(O)/SEM-6/CS-611/2011 Which one is not an application layer protocol iv) **SMTP** b) Telnet a) **TCP** c) d) DNS. FTP runs on which port? v) 23 b) 8080 a) c) 80 d) 1023. The x.25 standard specifies a vi) technique for dial access DTE/DCE interface b) c) data bit rate d) none of these. vii) IEEE 802.7 is the standard for a) Broadband b) Fibre optic Bluetooth d) CSMA. c) viii) Which of the following is considered a broad band communication channel? Coaxial cable b) Fibre optics cable a) Microwave circuits d) all of these. c) ix) A protocol is a set of rules governing a time sequence of events that must take place between peers b) between an interface a) between modems d) across an interface. c)

The transmission signal coding method of TI carrier is

b)

d)

NRZ

Binary.

Bipolar

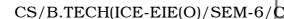
Manchester

called

a)

c)

X)





(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. a) Describe Simplex, Half Duplex and Full Duplex data transmission.
 - b) What are the advantages of analogue signal over digital signal? 3 + 2
- 3. a) Discuss advantages and disadvantages of mesh topology.
 - b) What are the advantages of networking in daily life?

3 + 2

- 4. Explain LLC and MAC sub layer.
- 5. Describe Circuit Switch, Message Switch and Packet Switch.

5

5

- 6. a) What do you mean by Network Security? Explain.
 - b) What do you mean by CSMA? How does it differ from CSMA/CA? 3 + 2

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. a) Discuss guided media communications.
 - b) Received data is 10010100101. Find the error by Hamming code.
 - c) Explain MODEM technology term of data communication. 5 + 5 + 5
- 8. a) Describe TCP header format.
 - b) Compare GSM and CDMA.
 - c) IP address : 182.44.82.16 Mask : 255.255.255.192. Find out the first address (network address). 6 + 6 + 3

6207 3 Turn over

CS/B.TECH(ICE-EIE(O)/SEM-6/CS-611/2011

- 9. a) What do you mean by ARQ? Explain selective repeat ARQ.
 - b) Discuss digital to digital encoding techniques.
 - c) A telephone line allows frequencies from 300 Hz to 3300 Hz. The SNR is 3162. Calculate the channel capacity. 6+6+3
- 10. Compare any *three* of the following :

 $3 \times 5 = 15$

- a) Dijkstra's Algorithm and Bellman-Ford Algorithm
- b) Pure ALOHA and Slotted ALOHA
- c) Token Bus and Token Ring
- d) STP and UTP
- e) CSMA/CD and CSMA/CA.
- 11. Write short notes on any *three* of the following: $3 \times 5 = 15$
 - a) FDDI-1 frame format
 - b) Leaky bucket algorithm
 - c) RSA algorithm
 - d) ISDN
 - e) Fibre optics.

6207 4