



Name :

Roll No. :

Invigilator's Signature :

**CS/B.Tech(ICE/EIE[O])/SEM-6/CS-611/2010
2010**

COMPUTER NETWORK & INTERNET WORKING

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 of the following : $10 \times 1 = 10$
 - i) How many link required for a fully connected ring topology ?
 - a) $n (n - 1)$
 - b) n
 - c) $n (n - 1) / 2$
 - d) $(n - 1)$.
 - ii) Which one is a DCE device ?
 - a) Modem
 - b) Computer
 - c) Network Card
 - d) None of these.
 - iii) Which one is a UNIX command to check your IP ?
 - a) ip
 - b) ipconfig
 - c) ifconfig
 - d) showip.
 - iv) Which one is not an application layer protocol ?
 - a) SMTP
 - b) Telnet
 - c) TCP
 - d) DNS.

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GROUP – B
(Short Answer Type Questions)

Answer any *three* of the following.

3 × 5 = 15

2. a) Discuss advantages and disadvantages of bus topology.
b) Give some daily life example of Data communication.
3 + 2
3. a) Describe simplex, half duplex and duplex data transmission.
b) Describe role of computer network ? 3 + 2
4. Explain MODEM technology in respect of data communication. 5
5. Describe TCP header format. 5
6. a) What do you mean by network security ? Explain.
b) What do you mean by CSMA ? How it differ from CSMA/CD ? 3 + 2

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following.

3 × 15 = 45

7. a) Write about unguided media communications.
b) Received data is 10010100101. Find the error by Hamming code.
c) Explain LLC and MAC sub layer. 5 + 5 + 5
8. a) Compare circuit switch, message switch and packet switch.
b) Compare GSM and CDMA.
c) What do you mean by Class A, B and C IP ? 6 + 6 + 3



9. a) What do you mean by ARQ ? Explain selective reject ARQ.
- b) Discuss digital to digital encoding techniques.
- c) What is www ? How it works ? 6 + 6 + 3
10. a) What type of congestion control are used in networking system ? What types of policies are used ?
- b) What is the difference between open loop and closed loop congestion control ?
- c) What do you mean by Gateway, HUB and repeater ?
- d) What is ethernet LAN ? 6 + 4 + 3 + 2
11. a) What are the basic security requirements in a network security ?
- b) Discuss about the algorithm for confidentiality.
- c) What is Data Encryption Standard (DES) ?
- d) Discuss briefly about RSA algorithm. 3 + 4 + 4 + 4
12. Write short notes on any *three* of the following : 3 × 5
- a) Sliding window protocol
- b) MODEM
- c) B - ISDN
- d) Error detection and correction
- e) X.25 inter networking
- f) SONET
- g) DWDM.