

Name :

Roll No. :

Invigilator's Signature :

CS/B.Tech/CSE(N)/SEM-5/CS-504B/2012-13

2012

DATA COMMUNICATION (ECE)

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 for the following :

10 × 1 = 10

- i) File transfer is done by

- | | |
|----------------------|-------------------|
| a) Physical layer | b) DLL |
| c) Application layer | d) Network layer. |

- ii) Which of the following is better than other ?

- | | |
|------------|------------------|
| a) CSMA | b) CSMA/CD |
| c) CSMA/CA | d) all of these. |

5403 (N)

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- iii) Each frame must contain
 - a) only source address
 - b) only destination address
 - c) source and destination address
 - d) source or destination address.
- iv) Which of the following IP address classes is unicast ?
 - a) Class A
 - b) Class B
 - c) Class C
 - d) All of these.
- v) Routing information Protocol is implemented by
 - a) Distance Vector Routing
 - b) Path Vector Routing
 - c) Static Routing
 - d) none of these.
- vi) Which of the following standards is used in Token Bus network ?
 - a) 802.2
 - b) 802.3
 - c) 802.4
 - d) 802.5.
- vii) Router works in
 - a) Physical layer
 - b) DLL
 - c) Network layer
 - d) none of these.

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viii) How many types of firewall are there ?

- a) 2 types b) 3 types
c) 4 types d) 5 types.

ix) Which connector is used for UTP ?

- a) RJ-45 b) RJ-11
c) RG-49 d) All of these.

x) Which algorithm is used for encryption ?

- a) RSA b) BSF
c) DSF d) none of these.

GROUP – B**(Short Answer Type Questions)**Answer any *three* of the following. 3 × 5 = 15

2. Explain about message switching with proper diagram.
3. Explain the principle of Go-back-N ARQ.
4. Explain about DNS
5. What is firewall ? Why is it needed ? 2 + 3
6. What you know about token bus and token ring ? 3 + 2

GROUP – C**(Long Answer Type Questions)**Answer any *three* of the following. 3 × 15 = 45

7. a) Explain about IP addressing with its type. Why it is needed for Networking ?
b) Explain Leaky bucket algorithm for congestion control.
(8 + 2) + 5

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8. a) Explain about ALOHA.
- b) How does CRC detect the error in a bit stream ?
Explain with example.
- c) How does fibre-optic work ? Explain. 5 + 5 + 5
9. Explain about the various modes of data transfer. Explain the property of flow control. How does SONET work in networking ? Explain. What is subnet mask in networking ?
3 + 5 + 4 + 3
10. Explain the function of various layers in TCP/IP. What is packet filter firewall ? Why is it needed ? How do you correct single bit error of a sending bit stream ? Explain with proper example 7 + 2 + 1 + 5
11. Write short notes on any *three* of the following : 3 × 5
- a) FTP
- b) SMTP
- c) e-mail
- d) POP
- e) Router.
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