

2304

**B.E. 6th Semester (ECE) Examination,
May-2013**

COMPUTER NETWORK

Paper-IT-305-E

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions.

1. (a) Explain the functioning of 7 layers of OSI model.
What is the necessity of using 7 layers concept in OSI model ? 10
- (b) For n devices in a network, what is the number of cable links required for a mesh, ring and star topology, respectively ? 5
- (c) What are three similarities and three differences between OSI and TCP reference models ? 5
2. (a) Describe the following three fields of TCP header :
 - (i) Sequence number
 - (ii) Data offset
 - (iii) Urgent pointer 10
- (b) How does TCP handle connection establishment and crash recovery ? 10
3. Give an overview of protocols used for Email. 20

2304-P-2-Q-8 (13)

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2304

4. (a) Differentiate between the following : 10
(i) Bit rate and Baud rate
(ii) IEEE 802.4 and 802.5
(b) Enlist two factors that cause congestion in the Subnet. 5
(c) How is Selective Repeat better than Go Back N? 5
5. (a) Describe the characteristics and application of following network devices :
(i) Routers
(ii) Bridges
(iii) Switches 10
(b) How slotted ALOHA improves the performance over pure ALOHA? Explain. 10
6. How does ATM differ from frame relay? List and briefly define the ATM service classes. 20
7. (a) Explain the working of Routing Information Protocol (RIP). Also, explain the common problems that can occur with RIP. 10
(b) Why is TCP reliable and UDP unreliable protocol? 10
8. Write short notes on : 20
(a) Class of service and quality of service
(b) Proxy Servers

2304