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**B. Tech. 6th Semester Electronics and Communication  
Engineering Examination, May-2013  
COMPUTER NETWORK**

**Paper-IT-305-F**

**Time allowed : 3 hours]**

**[Maximum marks : 100**

**Note :** *Question No. 1 is compulsory. Attempt one question from each section. All questions carry equal marks.*

**1. Explain the following :**

- (a) ARPANET
- (b) HTTP, SMTP, IMAP, NNTP, FTP
- (c) Frame Relay
- (d) Security Management.

**Section-A**

**2. (a) What do you mean by Computer Network?**

**Explain the different types of Network. 10**

**(b) What do you mean by Connection Oriented and Connection less services ? Explain. 10**

**3. Explain in detail the five layer architecture with Interfaces and Protocols. 2**

**Section-B**

4. What do you mean by Transport Layer in TCP/IP model?  
Explain the different protocols used in Transport Layer.  
Also explain the TCP Header in detail with diagram. 20

5. (a) Explain the complete E-mail system with different Protocols. 10

(b) Explain the following :

(i) DNS

(ii) Internet Control Protocols

**Section-C**

6. What do you mean by Routing ? Explain different types of Routing. Also explain the Shortest Path Routing and Hierarchical Routing. 20

7. (a) Explain the IEEE 802 standard in which token passing is used. 10

- (b) Explain the Synchronous Digital Hierarchy/  
Synchronous Optical Network in detail. 10



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**Section-D**

8. Explain the following :

- (i) Remote Monitoring Techniques
- (ii) Performance Management. 20

9. Explain the following :

- (i) Firewall
- (ii) Class of Service
- (iii) Proxy Server
- (iv) Network Operating System. 20