

### **SECTION-A**

1. What are the basic components of a Network ? Discuss different types of network in detail. 15
2. (a) What are various transmission mediums in computer networks ?  
Discuss. 7
- (b) Define TCP/IP reference model. How it works ? Discuss different layers of TCP/IP model in detail. 8

### **SECTION-B**

3. What is Multiplexing ? What are its different types ? Discuss in detail. 15
4. Explain the following :
  - (a) Pulse Code Modulation 2  $\times$  7.5 = 15
  - (b) Hybrid switching

### **SECTION-C**

5. (a) What is IEEE 802 standard ? How many IEEE 802 standards are there ? Discuss in detail. 10
- (b) How Token Bus Network works ? 5
6. How Data Link Layer works ? Explain Data Link Layer Design Issues in detail. 15

### **SECTION-D**

7. What is cryptography in computer networks ? What are its types ?  
Discuss in detail. 15
8. What is a network service ? What services can a computer network offer ? Discuss in detail. 15