

B.E. (Electronics Engineering / Elect. & Telecommunication /  
Elect. & Communication Engineering) Eighth Semester (C.B.S.)

**Computer Communication Network**

P. Pages : 2

Time : Three Hours



**NRT/KS/19/3632/3643**

Max. Marks : 80

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- Notes :
1. All questions carry marks as indicated.
  2. Solve Question 1 OR Questions No. 2.
  3. Solve Question 3 OR Questions No. 4.
  4. Solve Question 5 OR Questions No. 6.
  5. Solve Question 7 OR Questions No. 8.
  6. Solve Question 9 OR Questions No. 10.
  7. Solve Question 11 OR Questions No. 12.
  8. Due credit will be given to neatness and adequate dimensions.
  9. Use of non programmable calculator is permitted.

1. a) Explain the concept of layered network architecture with reference to OSI and TCP/IP model. **8**
- b) Differentiate frame Relay technology with ATM. **5**

**OR**

2. a) Describe X – 25 network architecture with neat diagram and write their significance. **7**
- b) What are the different standards considered while designing the computer networks. Explain with examples. **6**
3. a) What are the different types of switching techniques used in computer networks. **10**
- b) Describe DSL technology in short. **4**

**OR**

4. a) Write short note on SONET network. **7**
- b) How to select the different standards in WiFi technology. **7**
5. a) What do you mean by BIT stuffing in HDLC frame? Explain. **7**
- b) Explain the role of sliding window protocol with neat diagram. **6**

**OR**

6. a) Why error detection and correction is necessary in computer networks? Explain different types of error detection techniques. **8**
- b) Explain in brief about Ethernet. **5**
7. a) What is IP addressing? How is it classified? How is subnet addressing performed. **6**

- b) Explain why BGP uses the service of TCP instead of UDP. **3**
- c) Explain congestion control in computer network. **5**

**OR**

- 8. a) What is IPv6? Explain its advantages over IPv4. Also explain its frame format. **7**
- b) What are different types of routing algorithms generally used in computer networks. Explain shortest path routing and link state routing. **7**
- 9. a) Differentiate the SMTP and SNMP protocols. **6**
- b) What is a web server? Explain x – server in brief. **7**

**OR**

- 10. a) Explain in brief about electronic mail. **4**
- b) Write short note on DNSs. **4**
- c) What do you mean by socket programming. Explain with example. **5**
- 11. a) What are different types of attacks found in computer networks? What are the preventive measures for them? **7**
- b) Explain private key algorithm. Draw block diagram for it and give its advantages over public key. **6**

**OR**

- 12. a) Explain asymmetric key cryptography with example. **7**
- b) Explain how internet is access through mobile handset. **3**
- c) Write short note on protocol tester. **3**

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