

B.E. Electronics & Telecommunication / Communication Engineering / Electronics Engineering  
Eighth Semester  
**EC801 - Computer Networks**

P. Pages : 2

Time : Three Hours



**GUG/W/18/2027**

Max. Marks : 80

- Notes : 1. Due credit will be given to neatness and adequate dimensions.  
2. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Draw ICP/IP model and explain the function of each layer. Compare it with OSI reference model. **9**  
b) Explain the various LAN topologies with relative merits and demerits. Give suitable example for each. **7**

**OR**

2. a) Explain the working of three levels of X.25 protocol. **8**  
b) What is ATM in computer networks? Explain ATM reference model in detail. **8**  
3. a) Explain various types of guided transmission media in detail. **8**  
b) Explain in detail fiber optics used as a transmission media in physical layer. **8**

**OR**

4. a) Explain the frame format of HDLC in detail. **8**  
b) Write a technical note on services provided by data link layer. **8**  
5. a) Explain CSMA/CD and CSMA/CA techniques. **8**  
b) What are sliding window protocol? Explain one bit sliding window protocol. **8**

**OR**

6. a) Explain fast ethernet and gigabit Ethernet. **8**  
b) Explain the working of IEEE 802.3 CSMA/CD. Give the various fields of Ethernet MAC sublayer protocol. **8**  
7. a) Explain in detail Address Resolution Protocol (ARP) and Reverse Address Resolution Protocol. **8**  
b) What are the various techniques of congestion control in data gram networks. **8**

**OR**

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|----|----|---|---|
| 8. | a) | Explain Wireless TCP and UDP in detail.   | 8 |
|    | b) | Explain classless and class full IP addressing.   | 8 |
| 9. | a) | What is cryptography used for Network Security? Give difference between conventional and public key encryption. | 8 |
|    | b) | What do you mean by integrity of secure network? How can it be obtained on a public network.                    | 8 |

**OR**

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|-----|---------------------------------------|---------------------|----|
| 10. | Write short note on <b>any four</b> . |                     | 16 |
|     | i)                                    | Domain name system. |    |
|     | ii)                                   | Electronic Mail.    |    |
|     | iii)                                  | Digital Signature.  |    |
|     | iv)                                   | World Wide Web.     |    |
|     | v)                                    | Multimedia.         |    |

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