

B.E. Electrical (Electronics & Power) Engineering (Model Curriculum) Semester - VIII  
**OEC-5-3 - Computer Networks**

P. Pages : 2

Time : Three Hours



**GUG/S/23/14353**

Max. Marks : 80

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- Notes : 1. All questions are compulsory.  
2. Assume suitable data wherever necessary.

1. a) Draw and explain the OSI reference model for network. Also gives its applications. **8**  
b) Explain the various LAN topologies with relative merit and demerits. Give suitable example for each. **8**

**OR**

2. a) Explain X.25 and frame relay in detail. **8**  
b) What is switching? Explain circuit switching and packet switching in short. **8**
3. a) Explain about the different types of transmission media in computer networks. **8**  
b) Explain Frame format of PPP protocol. **8**

**OR**

4. a) Explain in detail fiber optics used as transmission media in physical layer. **8**  
b) Explain IEEE 802.3, 802.4 & 802.5 standards. **8**
5. a) Compare connectionless and connection-oriented services in network layer. **8**  
b) Explain design issues in network layer. **8**

**OR**

6. a) Explain virtual circuit & datagram networks. **8**  
b) What is firewall? Explain types of firewall & advantages of firewall. **8**
7. a) Explain in details elements of transport protocol. **8**  
b) Explain TCP and UDP in detail. **8**

**OR**

8. a) Explain transport services in transport layer. **8**  
b) Write concept of Socket. **8**

9. a) i) Explain DNS in brief. 4
- ii) Explain Electronic mail. 4
- b) What is function of SMTP & mail gateways? 8

**OR**

10. Write short note on: 16
- i) Digital Signature.
- ii) World Wide Web.
- iii) Multimedia.
- iv) File Transfer Protocol.

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