



SRI VASAVI INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of Electronics and Communication Engineering

Brain Storming

Course :OC

Class:IV- B.Tech I Sem

Topic: Overview of optical communication

1. What is optical fiber communication, and how does it differ from traditional copper wire communication?
2. What are the main components of an optical fiber communication system?
3. Why is light used as a transmission medium in optical fibers?
4. What is total internal reflection, and why is it important in optical fibers?
5. What are the different types of optical fibers, and how do they differ (e.g., single-mode vs. multi-mode)?
6. How does the refractive index affect the propagation of light in an optical fiber?
7. What is attenuation in optical fibers, and what factors contribute to it?
8. How do dispersion and bandwidth limitations affect optical fiber performance?
9. What is the role of an optical transmitter and receiver in a fiber optic system?
10. What are the main advantages of using optical fibers over traditional communication methods?
11. In which fields is optical fiber communication most widely used (e.g., internet, medical, military)?
12. What are some of the challenges in installing and maintaining optical fiber networks?
13. What are the limitations of optical fiber communication in long-distance data transmission?