**M.G.M’s COLLEGE OF ENGINEERING, NANDED**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Assignment: 2**

**Subject: Data Communication Class: SE (CSE) - I**

**Questions:**

1. **Explain Delta modulation in detail.**
2. **Define Spread Spectrum. Explain FHSS.**
3. **Describe Coaxial cable in detail.**
4. **Explain data rate management in context to TDM.**
5. **Describe the T-1 frame structure of multiplexing telephone lines.**
6. **Define band. List various bands, their ranges, propagation methods, & applications.**
7. **We need to use synchronous TDM and combine 25 digital resources, each of which of 100 Kbps. Each output slot carries 1 bit from each digital source, but 1 extra bit is added for synchronization. Calculate size of frame , frame rate, duration of frame, output data rate and efficiency of the system.**
8. **Explain PCM encoder and decoder with suitable block diagram.**
9. **Draw the performance graph of UTP cable. List advantages of optical fiber cable over UTP and co-axial cable.**
10. **Explain various transmission modes.**
11. **Draw and explain the analog hierarchy of FDM.**
12. **Define STP and UTP cable. Give the specification, data rate and use of various categories of UTP cable.**
13. **Explain optical fiber cable in detail.**
14. **Explain the important characteristics of line coding.**
15. **Explain the line coding schemes in detail.**
16. **Explain the technique of Amplitude shift keying in detail.**
17. **Draw and explain the process of frequency division multiplexing.**
18. **“In a packet switched network, there is no resource reservation;resources are allocated on demand.” Explain.**
19. **Draw multistage switch.**
20. **Explain circuit switched network.**