



12. a) Describe in details about the operation of PSK and MSK with neat diagram.

(OR)

b) Discuss the details about GMSK with neat diagram.

13. a) State and prove Shannon's noiseless coding theorem.

(OR)

b) Describe the concept of source coding theorem.

14. a) Describe the frequency division multiple access techniques.

(OR)

b) Describe the time division multiple access techniques.

15. a) i) Explain about satellite communication and its types. (8)

ii) Write short notes on cellular CDMA. (5)

(OR)

b) What is optical fiber ? Explain the details about the optical detectors.

PART - C (1×15=15 Marks)

16. a) Propose and discuss a SCADA scheme for a typical power distribution system.

(OR)

b) i) A binary PAM communication system is used to transmit data over an AWGN channel. The prior probabilities for the bits are $P(a_m = 1) = \frac{1}{3}$ and $P(a_m = -1) = \frac{2}{3}$. Determine the average threshold at the detector and average probability of error. (10)

ii) Write a technical note on applications of Data Communication. (5)