

PART – B (5 × 16 = 80 Marks)

11. (a) With a neat sketch explain the operation of single side band AM transmitter. (16)

OR

- (b) Explain the FM generation using Armstrong method. (16)

12. (a) Discuss the various types of delta modulation schemes. (16)

OR

- (b) (i) Compare PAM, PWM and PPM. (8)

- (ii) Enumerate the generation of PWM wave with a neat sketch. (8)

13. (a) (i) Compare linear and convolution codes. (6)

- (ii) State the conditions which hamming codes has to satisfy. (4)

- (iii) Explain the following terms Code efficiency, Channel data rate and systematic codes. (6)

OR

- (b) Enumerate Shannon's Fano algorithm and Huffman coding with a suitable example. (16)

14. (a) List out the various multiple access techniques and explain any two in detail. (16)

OR

- (b) State the need for spread spectrum modulation and explain its operation with a neat block diagram. (16)

15. (a) Discuss the various light generating and detecting systems in a fiber optic communication. (16)

OR

- (b) (i) Illustrate the operation of SCADA communication with a block diagram. (8)

- (ii) Discuss the various losses in optic fibers. (8)