

EXTC-IV CBCGS

PCE

[Time: 3 Hours]

1. Q. 1 is compulsory
2. Attempt any three questions out of remaining five
3. Figure to the right indicate full marks.
4. Assume suitable data if required and mention the same in solution.

1 Solve the following

- a) Distinguish between narrowband and wideband FM
 - b) What is companding?
 - c) Why AGC is required in radio receivers?
 - d) Explain aliasing error and aperture effect.
 - e) Explain various types of noise affecting communication system.
- 2a) What are the drawbacks of delta modulation. Explain adaptive delta modulation in detail. 10
- b) What is signal multiplexing? Explain TDM and FDM in detail. 10
- 3 a) State and prove sampling theorem for low pass bandlimited signals. 10
- b) Explain practical diode detector with suitable diagram. 10
- 4 a) What are different methods of FM generation? Explain reactance modulator in detail. 10
- b) Explain how PWMs generated from PWM. 10
- 5 a) Explain superheterodyne receiver. 10
- b) Explain VSB transmission. 10
- 6 Write note on any four. 20
1. Quadrature amplitude modulation
 2. Amplitude limiting and thresholding
 3. Double spotting
 4. Low level and high level modulation
 5. PM and DPCM