

**(ELE5SA)**

**(3322-5A)**

**B.Sc. DEGREE EXAMINATION,  
NOVEMBER/DECEMBER 2020.**

**(Adv. Supplementary)**

**Third Year – Fifth Semester**

**Electronics**

**Paper V — ANALOG AND DIGITAL  
COMMUNICATIONS**

**Time : Three hours**

**Maximum : 75 marks**

**SECTION A — (5 × 5 = 25 marks)**

**Answer any FIVE of the following.**

1. Give the power relations in AM wave.
2. What is meant by narrow band FM?
3. Explain thermal noise.
4. Explain about sampling theorem.
5. Explain companding briefly.
6. Explain the working of FM ratio detector.
7. Explain about time division multiplexing.
8. Explain about noise figure.

SECTION B — (5 × 10 = 50 marks)

Answer ALL questions.

9. (a) Explain suppression of carrier using balanced modulator method.

Or

- (b) Explain the frequency spectrum of AM wave and Give the representation of AM wave.

10. (a) Give the mathematical representation of FM wave. What is meant by wide band FM?

Or

- (b) Explain reactance modulator method for generation of FM signals.

11. (a) With the help of a block diagram explain super heterodyne receiver.

Or

- (b) Explain the working of phase discriminator method.

12. (a) Explain the generation and detection of PAM.

Or

- (b) Explain the generation and detection of PPM.

13. (a) Explain quantization noise and S/N ratio of PCM system.

Or

- (b) Explain the generation and detection of Amplitude shift keying.
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