



10EC53

- 7 a. Define : shot noise, thermal noise, white noise. (06 Marks)
b. Define noise equivalent band width and derive the expression for the same. (08 Marks)
c. Two 2-port devices are connected in cascade. For the first stage, the noise figure and available power gain are 5 dB and 12 dB respectively. For the second stage, the noise figure and available power gain are 15 dB and 10 dB respectively. Determine the overall noise figure in dB. (06 Marks)
- 8 a. Derive the expression for the figure of merit of DSB – SC receiver. (10 Marks)
b. Describe the pre – emphasis and de –emphasis in FM. (06 Marks)
c. An FM signal with a deviation of 75 KHz is applied to an FM demodulator. When the input SNR is 15 dB, the modulating frequency is 10 KHz, estimate the SNR at the demodulator output. (04 Marks)

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