Exercise 1:

Figure 1 shows a telecommunication receiver. Based on the information given, compute the following:

- (i) Input signal to noise ratio, SNR_i in dB
- (ii) Output signal to noise ratio, SNR_o in dB
- (iii) The receiver's noise figures in dB, F.
- (iv) Equivalent noise temperature, T_e

$$S_{i} = 3x10^{-10} W \longrightarrow A_{p} = 1x10^{6} W \longrightarrow S_{o}$$
$$N_{d} = 6 \times 10^{-6} W \longrightarrow N_{o}$$



[10 Marks] [CO1, PO2, C4]