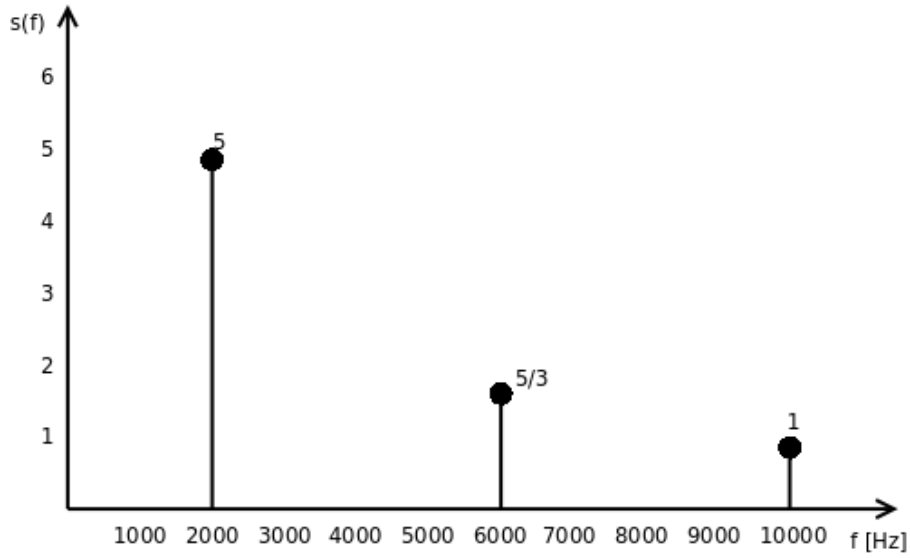
ITS323 – Quiz 2

Name: _____

ID: _____ Mark: _____ (out of 10)

Question 1 [3 marks]

a) Write an equation for the signal *s(t)* shown in the the plot below. [2 marks]



b) What is the absolute bandwidth of the signal? [1 mark]

Question 2 [1 mark]

Shielded Twisted Pair (STP) can provide higher data rates than Unshielded Twister Pair (UTP), but is harder to install. TRUE FALSE

Question 3 [4 marks]

A receiver receives a 100KHz signal with power 310mW.

a) If the channel also contains noise of 10mW, what is the theoretical data rate possible? [2 marks]

b) Assuming the noise cannot be controlled, explain how the data rate can be increased, without increasing the bandwidth. [1 mark]

c) What is a disadvantage of increasing the data rate with the approach you suggest in part (b)? [1 mark]

Question 4 [2 marks]

The path between SIIT Bangkadi and SIIT Rangsit is measured to have a power loss of 90dB. Both transmit and receive antenna's are identical, with a gain of 10dBi. If the receiver has a receive power threshold of -80dBW, what is the minimum transmit power for successful reception?