

EEE482F: Problem Set 1

1. 1.97 bits.
2. ???
3. ???
4. $H = 3.32$ bits, $T = 1.66$ sec.
5. ???
6. ???
7. ???
8. ???
9. ???
10. (a) 200 samples/sec
(b) 9 bits/word
(c) 1.8 kbits/sec
(d) 900 Hz.
11. ???
12. ???
13. ???
14. ???
15. ???
16. ???
17. (a)

$$H(f) = T e^{-j\pi f T} \left(\frac{\sin \pi f T}{\pi f T} \right)$$

(b) $B_{\text{eq}} = 1/(2T)$.

18. ???

19. ???

20. ???

21. (a) 5.33 kbits/sec

(b) 667 Hz.

22.

23. ???

24. ???

25. ???

26. (a) 0.00534

(b) 0.427.