Quiz 2 will be inspired by these questions, but will probably not be exactly like any one of them or be worded in the same way. It may also ask you questions that build on or apply the ideas explored in the questions below. So, it is important that you understand the underlying ideas, not just be able to parrot them.

1. Question 1.20 (a)-(d) from the Sklar text.
2. Question 2.2 from the Sklar text.
3. Question 2.4 from the Sklar text.
4. Question 2.5 from the Sklar text.
5. Question 2.6 from the Sklar text.
6. Question 2.7 from the Sklar text.
7. Question 2.8 from the Sklar text.
8. Question 2.11 from the Sklar text.
9. Question 2.15 from the Sklar text.
10. Question 2.17 from the Sklar text.
11. Question 2.18 from the Sklar text.
12. Sketch the Bipolar RZ waveform for 0100101. Be prepared to do the same for the other schemes we have discussed.
13. X is a Gaussian random variable with zero mean and variance 9. What is the probability that X is not in the interval $-6 < X < 6$?
14. The PDF of a random variable X is equal to k for $a \leq x \leq b$ and zero otherwise. Let $a = -1$ and $b = 2$. Calculate $P(|X| \leq 0.5)$
15. Binary data is transmitted in blocks of 16 binary digits. The probability that a binary digit is received in error is 0.01. FInd the mean and variance of the errors per block.
16. White noise with PSD of $N/2$ goes through an ideal LPF with bandwidth f_B. What's the autocorrelation function of the output?
17. Noise with PSD of $A^2 4\alpha/(\omega^2 + (2\alpha)^2)$ goes through an ideal BPF with bandwidth B Hz centred at $f_c = \alpha/\pi$ where $f_c \gg B$. At the output find the DC component and the average power.
18. Question 3.4 from the Sklar text.
19. Question 3.5 from the Sklar text.
20. Question 3.6 from the Sklar text.
21. Question 3.7 from the Sklar text.
22. Question 3.8 from the Sklar text.