1. In a classic index fund, which of the following does the fund do?
   a. Hold an equally weighted portfolio of all of the stocks in the index.
   b. Hold a market-cap weighted portfolio of all of the stocks in the index.
   c. Hold a portfolio of all of the stocks in the index, with the same weights that they have in the index.
   d. None of the above

2. With a sampled index fund, the fund holds only a subset of the stocks in the index. Which of the following is the best measure of how good a sampled index fund is performing?
   a. The returns generated on the fund should be higher than the returns on the index.
   b. The standard deviation on the fund should be lower than the standard deviation of the index.
   c. The correlation in returns between the index fund and the index returns should be close to zero.
   d. The correlation in returns between the index fund and the index returns should be close to one.

3. You can invest only in index funds and still be an active investor.
   a. True
   b. False

4. As a passive investor, you often have a choice between investing in an exchange-traded fund (ETF) or an index fund (on the same index). Why might you choose to invest in the ETF?
   a. The ETF will follow the index more closely than the index fund.
   b. The ETF will be less risky than an index fund.
   c. The ETF will deliver higher returns than an index fund.
   d. It costs less to buy an ETF than to buy an index fund.
   e. You can trade an ETF like any stock (buy, sell short) but you do not have the same flexibility with an index fund.

5. Which of the following does an enhanced index fund try to accomplish?
   a. Deliver higher returns than the index in question by investing in companies outside the index.
   b. Deliver higher returns than the index in question by investing in a subset of the stocks in the index.
   c. Deliver a higher return per unit of risk than the index in question by investing in companies outside the index.
   d. Deliver a higher return per unit of risk than the index in question by investing in a subset of the stocks in the index.
Solution

1. In a classic index fund, which of the following does the fund do?
   a. Hold an equally weighted portfolio of all of the stocks in the index.
   b. Hold a market-cap weighted portfolio of all of the stocks in the index.
   c. Hold all of the stocks in the index, weighting more under valued stocks more and more over valued stocks less.
   d. **Hold a portfolio of all of the stocks in the index, with the same weights that they have in the index.**
   e. None of the above

   *Explanation:* The objective with a classic index fund is to replicate the index, not build a better one.

2. With a sampled index fund, the fund holds only a subset of the stocks in the index. Which of the following is the best measure of how good a sampled index fund is performing?
   a. The returns generated on the fund should be higher than the returns on the index.
   b. The standard deviation on the fund should be lower than the standard deviation of the index.
   c. The correlation in returns between the index fund and the index returns should be close to zero.
   d. **The correlation in returns between the index fund and the index returns should be close to one.**

   *Explanation:* A good index fund is one that tracks the market perfectly, not one that out performs the market.

3. You can invest only in index funds and still be an active investor.
   a. True
   b. **False**

   *Explanation:* You can use index funds to time the market, even though you may not be a stock picker. You can even borrow money and buy index funds (in asset classes that you think are severely under valued).

4. As a passive investor, you often have a choice between investing in an exchange-traded fund (ETF) or an index fund (on the same index). Why might you choose to invest in the ETF?
   a. The ETF will follow the index more closely than the index fund.
   b. The ETF will be less risky than an index fund.
   c. The ETF will deliver higher returns than an index fund.
   d. It costs less to buy an ETF than to buy an index fund.
   e. **You can trade an ETF like any stock (buy, sell short) but you do not have the same flexibility with an index fund.**
Explanation: The advantage of an ETF is that it can be traded like a stock. While this increases the transactions costs (from a bid ask spread), it does also make ETF better suited for strategies that require trading quickly or selling short.

5. Which of the following does an enhanced index fund try to accomplish?
   a. Deliver higher returns than the index in question by investing in companies outside the index.
   b. Deliver higher returns than the index in question by investing in a subset of the stocks in the index.
   c. Deliver a higher return per unit of risk than the index in question by investing in companies outside the index.
   d. Deliver a higher return per unit of risk than the index in question by investing in a subset of the stocks in the index.

Explanation: Enhanced index funds try to stay close to the index while delivering more returns per unit of risk (higher Sharpe ratios) than the index.