

*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.*