CFA Examination Level III June Klein, CFA, manages a $100 million (market value) U.S. government bond portfolio for an institution for an institution. She anticipates a small parallel shift in the yield curve and wants to fully hedge the portfolio against any such change.

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| **Portfolio and Treasury Bond Futures Contract Characteristics** |
| **Security** | **Modified Duration** | **Basis Point Value** | **Conversion Factor for Cheapest to Deliver Bond** | **Portfolio Value/Future Contract Price** |
| Portfolio  | 10 years | $100,000  | Not Applicable | $100,000,000  |
| U.S Treasury bond futures contract | 8 years | $75.32  | 1 | 94-05 |

1. Discuss two reasons for using futures rather than selling bonds to hedge a bond portfolio. No calculations required.
2. Formulate Klein’s hedging strategy using only the futures contract shown. Calculate the number of futures contracts to implement the strategy. Show all calculations.
3. Determine how each of the following would change in value if interest rates increase by 10 basis points as anticipated. Show all calculations.
4. State three reasons why Klein’s hedging strategy might not fully protect the portfolio against interest rate risk.
5. Describe a zero-duration hedging strategy using only the government bond portfolio and options on U.S. Treasury bond futures contracts. No calculations required.