**1. Correct Answer: B.**

$$PV = \frac{7}{1.08^1} + \frac{7}{(1.08)^2} + \frac{7}{(1.08)^3} + \frac{107}{(1.08)^4} = 96.69$$

$$7*1.08^4 + 7*1.08^3 + 7*1.08^2 + 7*1.08 + 7 = 41.0662$$

$$100 = \frac{96.69 + 41.0662}{(1+r)^5}, r = 0.0662$$

**2. Correct Answer: C.**

When the holder of a bond experiences a one-time parallel shift in the yield curve, the Macaulay duration statistic identifies the number of years necessary to hold the bond so that the losses (or gains) from coupon reinvestment offset the gains (or losses) from market price changes. The duration gap is the difference between the Macaulay duration and the investment horizon. Modified duration approximates the percentage price change of a bond given a change in its yield-to-maturity.

**3. Correct Answer: C.**

| period | Cash flow | Present value | weight | Period×weight |
|--------|-----------|---------------|--------|---------------|
| 1 | 6 | 5.555556 | 0.058575 | 0.058575 |
| 2 | 6 | 5.144033 | 0.054236 | 0.108471 |
| 3 | 106 | 84.146218 | 0.887190 | 2.661570 |
| | | 94.845806 | 1.000000 | 2.828617 |

**4. Correct Answer: A.**

Duration is a linear approximation. It is the tangent line to the actual bond pricing curve for a given starting point (interest rate). The actual pricing curve for an option-free bond is convex. Because of convexity, as you move away from the tangency (the starting point), actual prices (i.e., those on the actual pricing curve) will always be above the tangent line.

**5. Correct Answer: B.**

Approximate percentage price change = −[7.91 × (−0.0026)] = 0.02057 or 2.06%.