

Name: HW 1.7 Key

1. A company issues a 25-year zero-coupon bond. The bond matures for 1000 and has a price of 557. Determine the yield on the bond, expressed as a nominal annual rate of interest compounded semiannually.

☒ A) 2.35% B) 1.98% C) 2.07% D) 2.17% E) 2.26%

$$557(1+j)^{50} = 1000 \rightarrow j = 0.01177$$
$$\rightarrow \boxed{i^{(2)} = 0.0235}$$

2. A U.S. Treasury bill has a price of 985 and matures in 13 weeks for 1000. Find the quoted rate for the T-Bill.

☒ A) 5.93% B) 5.58% C) 5.67% D) 5.76% E) 5.85%

$$985 = 1000 \left(1 - d \cdot \frac{13.7}{360} \right)$$

$$\boxed{d = 0.05934}$$

3. A U.S. Treasury bill matures in 26 weeks for 1000 and has a quoted rate of 3.1%. Find the price of the T-Bill.

☒ A) 984.33 B) 974.48 C) 976.95 D) 979.41 E) 981.87

$$P = 1000 \left(1 - 0.031 \cdot \frac{26.7}{360} \right)$$

$$= \boxed{984.33}$$

4. A Canadian Treasury bill has a price of 987 and matures in 13 weeks for 1000. Find the quoted rate for the T-Bill.

☒ A) 5.28% B) 5.05% C) 5.12% D) 5.20% E) 5.36%

$$1000 = 987 \left(1 + i \cdot \frac{13.7}{365} \right)$$

$$\boxed{i = 0.0528}$$

5. A Canadian Treasury bill matures in 26 weeks for 1000 and has a quoted rate of 3.8%. Find the price of the T-Bill.

☒ A) 981.40 B) 971.59 C) 974.04 D) 976.50 E) 978.95

$$1000 = P \left(1 + 0.038 \cdot \frac{26.7}{365} \right)$$

$$P = \boxed{981.40}$$