Question #1 of 56

Question ID: 1577193

Jorge Fullen is evaluating a 7%, 10-year bond that is callable at par in 5 years. Coupon payments can be reinvested at an annual rate of 7%, and the current price of the bond is $1,065.00 per $1,000 of face value. The bond pays interest semiannually. Should Fullen consider the yield to first call (YTC) or the yield to maturity (YTM) in making his purchase decision?

A) YTM, since YTM is greater than YTC. ✗

B) YTC, since YTC is less than YTM. ✓

C) YTC, since YTC is greater than YTM. ✗

Explanation

The bond is trading at a premium, and if the bond is called at par that premium would be amortized over a shorter period, resulting in a lower return. The lower return is the more conservative number, so the YTC should be used. You could use your financial calculator to solve for YTC assuming 10 semiannual coupon payments of $35 (FV = 1,000; PMT = 35; PV = –1,065; N = 10; solve for i = 2.75; × 2 to get annual YTC = 5.5%). Calculation of YTM would use the same inputs except N = 20, to get YTM = 6.12%

(Module 55.1, LOS 55.a)

Question #2 of 56

Question ID: 1574261

Neuman Company has bonds outstanding with five years to maturity that trade at a spread of +240 basis points above the five-year government bond yield. Neuman also has five-year bonds outstanding that are identical in all respects except that they are convertible into 30 shares of Neuman common stock. At which of the following spreads are the convertible bonds *most likely* to trade?

A) +210 basis points. ✓

B) +270 basis points. ✗

C) +330 basis points. ✗

Explanation

Because a conversion option is favorable for the bondholder, the convertible bonds should trade at a lower spread than otherwise identical non-convertible bonds.

(Module 55.1, LOS 55.b)

Question #3 of 56

Question ID: 1574235

A 20-year bond pays an annual coupon of 6% and has a par value of $1,000. If its current yield is 7%, its yield to maturity is *closest* to:

A) 8.6%. ✗

B) 7.4%. ✓

C) 7.0%. ✗

Explanation

We are given N, FV, and PMT, but to calculate the yield to maturity I/Y we also need the bond's current price (PV). We can use the given current yield to determine the price:

Because current yield = annual interest / price, we can state:

Price = annual interest / current yield

= $60 /0.07%

= $857.143

Therefore: N = 20; FV = 1,000; PMT = 60; PV = –857.143; CPT → I/Y = 7.3896%

(Module 55.1, LOS 55.a)

Question #4 of 56

Question ID: 1576469

A 15-year, 10% annual coupon bond is sold for $1,150. It can be called at the end of 5 years for $1,100. What is the bond's yield to call (YTC)?

A) 8.0%. ✓

B) 8.4%. ✗

C) 9.2%. ✗

Explanation

Input into your calculator:

N = 5; FV = 1,100; PMT = 100; PV = -1,150; CPT → I/Y = 7.95%.

(Module 55.1, LOS 55.a)

Question #5 of 56

Question ID: 1574252

Which of the following is the *most* accurate statement about stated and effective annual interest rates?

A) The stated rate adjusts for the frequency of compounding. ✗

B) The stated annual interest rate is used to find the effective annual rate. ✓

C) So long as interest is compounded more than once a year, the stated annual rate will always be more than the effective rate. ✗

Explanation

The effective annual rate, not the stated rate, adjusts for the frequency of compounding. The nominal, stated, and stated annual rates are all the same thing.

(Module 55.1, LOS 55.a)

Question #6 of 56

Question ID: 1574239

A 10% annual coupon, $1,000 par value bond that matures in 5 years is priced at 92.8. Its yield to maturity is *closest* to:

A) 12%. ✓

B) 10%. ✗

C) 11%. ✗

Explanation

The YTM can be calculated using money values or percent-of par values.

Using percent of par: N = 5; FV = 100; PMT = 10; PV = –92.8; CPT I/Y = 11.9972.

Using money values: N = 5; FV = 1,000; PMT = 100; PV = –928; CPT I/Y = 11.9972.

(Module 55.1, LOS 55.a)

Question #7 of 56

Question ID: 1576472

Consider a 5-year, semiannual, 10% coupon bond with a maturity value of 1,000 selling for $1,081.11. The first call date is 3 years from now and the call price is $1,030. What is the yield-to-call?

A) 3.91%.

B) 7.28%.

C) 7.82%.

Explanation

N = 6; PMT = 50; FV = 1,030; PV = –1,081.11; CPT → I = 3.91054

3.91054 × 2 = 7.82

(Module 55.1, LOS 55.a)

Question #8 of 56

Question ID: 1576467

A coupon bond pays annual interest, has a par value of $1,000, matures in 4 years, has a coupon rate of $100, and a yield to maturity of 12%. The current yield on this bond is:

A) 10.65%.

B) 11.25%.

C) 9.50%.

Explanation

FV = 1,000; N = 4; PMT = 100; I = 12; CPT → PV = 939.25.

Current yield = coupon / current price

100 / 939.25 × 100 = 10.65

(Module 55.1, LOS 55.a)

Question #9 of 56

Question ID: 1574253

A major brokerage house is currently selling an investment product that offers an 8% rate of return, compounded monthly. Based on this information, it follows that this investment has:

A) a periodic interest rate of 0.667%. ✓

B) a stated rate of 0.830%. ✗

C) an effective annual rate of 8.00%. ✗

Explanation

Periodic rate = 8.0 / 12 = 0.667. Stated rate is 8.0% and effective rate is 8.30%.

(Module 55.1, LOS 55.a)

Question #10 of 56

Question ID: 1574260

A disadvantage of G-spreads and I-spreads is that they are theoretically correct only if the spot yield curve is:

A) downward sloping. ✗

B) flat. ✓

C) upward sloping. ✗

Explanation

G-spreads and I-spreads are only correct when the spot yield curve is flat (yields are about the same across maturities).

(Module 55.1, LOS 55.b)

Question #11 of 56

Question ID: 1574248

McClintock 8% coupon bonds maturing in 10 years are currently trading at 97.55. These bonds are option-free and pay coupons semiannually. The McClintock bonds have a:

A) current yield less than 8.0%. ✗

B) true yield greater than the street convention. ✗

C) yield to maturity greater than 8.0%.

Explanation

A bond trading at a discount will have a YTM greater than its coupon. The current yield is 8 / 97.55 = 8.2%. True yield is adjusted for payments delayed by weekends and holidays and is equal to or slightly less than the yield on a street convention basis.

(Module 55.1, LOS 55.a)

Question #12 of 56

Question ID: 1576466

Calculate the current yield and the yield-to-first call on a bond with the following characteristics:

- 5 years to maturity
- $1,000 face value
- 8.75% semi-annual coupon
- Priced to yield 9.25%
- Callable at $1,025 in two years

	Current Yield	Yield-to-Call
A)	8.93%	11.02%
B)	8.93%	5.51%
C)	9.83%	19.80%

Explanation

To calculate the CY and YTC, we first need to calculate the present value of the bond: FV = 1,000; N = 5 × 2 = 10; PMT = (1000 × 0.0875) / 2 = 43.75; I/Y = (9.25 / 2) = 4.625; CPT → PV = -980.34 (negative sign because we entered the FV and payment as positive numbers). Then, CY = (Face value × Coupon) / PV of bond = (1,000 × 0.0875) / 980.34 = **8.93%**.

And the YTC calculation is: FV = 1,025 (price at first call); N = (2 × 2) = 4; PMT = 43.75 (same as above); PV = –980.34 (negative sign because we entered the FV and payment as positive numbers); CPT → I/Y = 5.5117 (semi-annual rate, need to multiply by 2) = **11.02%**.

(Module 55.1, LOS 55.a)

Question #13 of 56

Question ID: 1576475

Tony Ly is a Treasury Manager with Deeter Holdings, a large consumer products holding company. The Assistant Treasurer has asked Ly to calculate the current yield and the Yield-to-first Call on a bond the company holds that has the following characteristics:

- 7 years to maturity
- $1,000 face value
- 7.0% semi-annual coupon
- Priced to yield 9.0%
- Callable at $1,060 in two years

If Ly calculates correctly, the current yield and yield to call are approximately:

	CY	YTC	
A)	7.78%	15.82%	✗
B)	7.80%	15.72%	✗
C)	7.80%	15.82%	✓

Explanation

To calculate the CY and YTC, we first need to calculate the present value of the bond: FV = **1,000**, N = **14** = 7 × 2, PMT = **35** = (1000 × 0.07)/2, I/Y = **4.5** (9 / 2), Compute PV = -897.77 (negative sign because we entered the FV and payment as positive numbers).

Then, CY = (Face value × Coupon) / PV of bond = (1,000 × 0.07) / 897.77 = **7.80%.**

And finally, YTC calculation: FV = **1,060** (price at first call), N = **4** (2 × 2), PMT = **35** (same as above), PV = -897.77 (negative sign because we entered the FV and payment as positive numbers), Compute I/Y = 7.91 (semi-annual rate, need to multiply by 2) = **15.82%.**

(Module 55.1, LOS 55.a)

Question #14 of 56

Question ID: 1574240

A $1,000 bond with an annual coupon rate of 10% has 10 years to maturity and is currently priced at $800. The bond's yield-to-maturity is *closest* to:

A) 12.6%. ✗

B) 11.7%. ✗

C) 13.8%.

Explanation

FV = 1,000, PMT = 100, N = 10, PV = -800; Compute I/Y = 13.8

(Module 55.1, LOS 55.a)

Question #15 of 56

Question ID: 1574255

Other things equal, as the number of compounding periods increases, what is the effect on the effective annual rate (EAR)?

A) EAR increases.

B) EAR decreases.

C) EAR remains the same.

Explanation

The EAR increases with the frequency of compounding.

(Module 55.1, LOS 55.a)

Question #16 of 56

Question ID: 1576468

An 11% coupon bond with annual payments and 10 years to maturity is callable in 3 years at a call price of $1,100. If the bond is selling today for 975, the yield to call is:

A) 10.26%.

B) 14.97%.

C) 9.25%.

Explanation

PMT = 110, N = 3, FV = 1,100, PV = 975

Compute I = 14.97

(Module 55.1, LOS 55.a)

Question #17 of 56

Question ID: 1574257

If an investment has an APR of 18% and is compounded quarterly, its effective annual rate (EAR) is *closest to*:

A) 18.81%. ✗

B) 18.00%. ✗

C) 19.25%. ✓

Explanation

Because this investment is compounded quarterly, we need to divide the APR by four compounding periods: 18 / 4 = 4.5%. EAR = $(1.045)^4 - 1 = 0.1925$, or 19.25%.

(Module 55.1, LOS 55.a)

Question #18 of 56

Question ID: 1574237

A 20-year, 9% annual coupon bond selling for $1,098.96 offers a yield of:

A) 8%. ✓

B) 10%. ✗

C) 9%. ✗

Explanation

N = 20, PMT = 90, PV = -1,098.96, FV = 1,000, CPT I/Y

(Module 55.1, LOS 55.a)

Question #19 of 56

Question ID: 1576485

A fixed coupon callable bond issued by Protohype Inc. is trading with a yield to maturity of 6.4%. Compared to this YTM, the bond's option-adjusted yield will be:

A) higher. ✗

B) lower. ✓

C) the same. ✗

Explanation

The option-adjusted yield is the yield a bond with an embedded option would have if it were option-free. For a callable bond, the option-adjusted yield is lower than the YTM. This is because the call option may be exercised by the issuer, rather than the bondholder. Bond investors require a higher yield to invest in a callable bond than they would require on an otherwise identical option-free bond.

(Module 55.1, LOS 55.b)

Question #20 of 56

Question ID: 1574245

What is the equivalent annual-pay yield for a bond with a semiannual-bond basis yield of 5.6%?

A) 5.52%.

B) 5.60%.

C) 5.68%.

Explanation

The annual-pay yield is computed as follows:

$$\text{Annual-pay yield} = [(1 + 0.056 / 2)^2 - 1 = 5.68\%$$

(Module 55.1, LOS 55.a)

Question #21 of 56

Question ID: 1574263

An interpolated spread (I-spread) for a bond is a yield spread relative to:

A) benchmark spot rates.

B) risk-free bond yields.

C) swap rates.

Explanation

Spreads relative to swap rates are referred to as Interpolated or I-spreads.

(Module 55.1, LOS 55.b)

Question #22 of 56

Question ID: 1574258

A Treasury bond due in one-year has a yield of 8.5%. A Treasury bond due in 5 years has a yield of 9.3%. A bond issued by Galaxy Motors due in 5 years has a yield of 9.9%. A bond issued by Exe due in one year has a yield of 9.4%. The yield spreads on the bonds issued by Exe and Galaxy Motors are:

	Exe	Galaxy Motors	
A)	0.1%	0.6%	✗
B)	0.1%	1.4%	✗
C)	0.9%	0.6%	✓

Explanation

9.4 – 8.5 = 0.9

9.9 – 9.3 = 0.6

(Module 55.1, LOS 55.b)

Question #23 of 56

Question ID: 1576482

A single yield used to discount all of a bond's cash flows when calculating its price is *most accurately* described as the bond's:

A) yield to maturity. ✓

B) simple yield. ✗

C) current yield. ✗

Explanation

Yield to maturity is the discount rate used to discount each of a bond's cash flows when calculating the bond's price. Current yield is a bond's annual coupon payment divided by its price. Simple yield is a bond's annual coupon payment plus amortization of a discount or minus amortization of a premium.

(Module 55.1, LOS 55.a)

Question #24 of 56

Question ID: 1574241

A 6% bond paying coupons semi-annually has 10 years until maturity. The bond currently trades at 111.5. Its yield to maturity is *closest* to:

A) 4.529%.

B) 4.543.

C) 4.556%.

Explanation

N = 10 × 2 = 20; PV = –111.5; PMT = 6 / 2 = 3; FV = 100.

Compute I/Y = 2.2777 (semiannual) × 2 = 4.5554%.

(Module 55.1, LOS 55.a)

Question #25 of 56

Question ID: 1574246

Venenata Foods has a 10-year bond outstanding with an annual coupon of 6.5%. If the bond is currently priced at $1,089.25, which of the following is *closest* to the semiannual-bond basis yield?

A) 5.33%.

B) 5.26%.

C) 5.42%.

Explanation

First, find the annual yield to maturity of the bond as: FV = $1,000; PMT = $65; N = 10; PV = –1,089.25; CPT → I/Y = 5.33%. Then, find the semiannual-bond basis yield as: $2 \times [(1 + 0.0533)^{0.5} - 1] = 0.0526 = 5.26\%$.

(Module 55.1, LOS 55.a)

Question #26 of 56

Question ID: 1574256

A local bank advertises that it will pay interest at the rate of 4.5%, compounded monthly, on regular savings accounts. What is the effective rate of interest that the bank is paying on these accounts?

A) 4.50%.

B) 4.65%.

C) 4.59%.

Explanation

$(1 + 0.045 / 12)^{12} - 1 = 1.0459 - 1 = 0.0459$.

(Module 55.1, LOS 55.a)

Question #27 of 56

Question ID: 1576484

Which of the following adjustments is *most likely* to be made to the day count convention when calculating corporate bond yield spreads to government bond yields?

A) Adjust the government bond yield to actual months and years.

B) Adjust the corporate bond yield to actual months and years.

C) Adjust both the corporate and government bond yields to actual months and years.

Explanation

Corporate bond yields are typically based on a 30/360 day count. When calculating spreads, corporate yields are often restated to the actual/actual basis typically used to state government bond yields.

(Module 55.1, LOS 55.a)

Question #28 of 56

Question ID: 1576465

A $1,000 par value, 10%, semiannual, 20-year debenture bond is currently selling for $1,100. What is this bond's current yield and will the current yield be higher or lower than the yield to maturity?

	Current Yield	Current Yield vs. YTM
A)	8.9%	lower
B)	9.1%	higher

C) 8.9% higher

Explanation

Current yield = annual coupon payment/price of the bond

CY = 100/1,100 = 0.0909

The current yield will be between the coupon rate and the yield to maturity. The bond is selling at a premium, so the YTM must be less than the coupon rate, and therefore the current yield is greater than the YTM.

The YTM is calculated as: FV = 1,000; PV = -1,100; N = 40; PMT = 50; CPT → I = 4.46 × 2 = 8.92

(Module 55.1, LOS 55.a)

Question #29 of 56

Question ID: 1574250

A stated annual interest rate of 9% compounded semiannually results in an effective annual rate *closest to*:

A) 8.81%.

B) 18.81%.

C) 9.2%.

Explanation

If the stated rate is 9% then the effective six month (period) rate is 9% / 2 = 4.5%

The effective annual rate is, therefore, $(1 + \text{period rate})^{\#\text{ Periods in a year}} - 1$

$EAR = (1 + 4.5\%)^2 - 1 = 9.2\%$

(Module 55.1, LOS 55.a)

Question #30 of 56

Question ID: 1576477

What is the current yield for a 5% three-year bond whose price is $93.19?

A) 2.68%.

B) 5.00%.

C) 5.37%.

Explanation

The current yield is computed as follows:

Current yield = 5% x 100 / $93.19 = 5.37%

(Module 55.1, LOS 55.a)

Question #31 of 56

Question ID: 1574251

A local bank offers an account that pays 8%, compounded quarterly, for any deposits of $10,000 or more that are left in the account for a period of 5 years. The effective annual rate of interest on this account is:

A) 4.65%.

B) 8.24%.

C) 9.01%.

Explanation

$(1 + \text{periodic rate})^{m} - 1 = (1.02)^{4} - 1 = 8.24\%$.

(Module 55.1, LOS 55.a)

Question #32 of 56

Question ID: 1576474

What is the yield to call on a bond that has an 8% coupon paid annually, $1,000 face value, 10 years to maturity and is first callable in 6 years? The current market price is $1,100. The call price is the face value plus 1-year's interest.

A) 6.00%.

B) 7.14%.

C) 7.02%.

Explanation

N = 6; PV = -1,100.00; PMT = 80; FV = 1,080; Compute I/Y = 7.02%.

(Module 55.1, LOS 55.a)

Question #33 of 56

Question ID: 1576470

If a $1,000 bond has a 14% coupon rate and a current price of 950, what is the current yield?

A) 14.00%.

B) 14.74%.

C) 15.36%.

Explanation

(0.14)(1,000) = $140 coupon

140/950 × 100 = 14.74

(Module 55.1, LOS 55.a)

Question #34 of 56

Question ID: 1576464

Harmon Moving has a 13.25% coupon semiannual coupon bond currently trading in the market at $1,229.50. The bond has eight years remaining until maturity, but only two years until first call on the issue at 107.50% of $1,000 par value. Which of the following is *closest* to the yield to first call on the bond?

A) 5.16%.

B) 4.72%.

C) 9.14%.

Explanation

To compute yield to first call, enter: FV = $1,075; N = 2 × 2 = 4; PMT = $66.25; PV = –1,229.50, CPT → I/Y = 2.36%, annualized as (2.36)(2) = 4.72%.

(Module 55.1, LOS 55.a)

Question #35 of 56

Question ID: 1576486

An investor purchases a 5-year, A-rated, 7.95% coupon, semiannual-pay corporate bond at a yield to maturity of 8.20%. The bond is callable at 102 in three years. The bond's yield to call is *closest to*:

A) 8.3%.

B) 8.6%.

C) 8.9%.

Explanation

First determine the price paid for the bond:>

> N = 5 × 2 = 10; I/Y = 8.20 / 2 = 4.10; PMT = 7.95 / 2 = 3.975; FV = 100; CPT PV = –98.99

Then use this value and the call price and date to determine the yield to call:

> N = 3 × 2 = 6; PMT = 7.95 / 2 = 3.975; PV = –98.99; FV = 102; CPT I/Y = 4.4686 × 2 = 8.937%

(Module 55.1, LOS 55.a)

Question #36 of 56

Question ID: 1574264

If a callable bond has an option-adjusted spread (OAS) of 75 basis points, this *most likely* suggests:

A) the bond has a zero-volatility spread greater than 75 basis points.

B) the 75 basis points represent the investor's compensation for credit risk, liquidity risk, and volatility risk.

C) the implied cost of the call option is the bond's nominal spread minus 75 basis points.

Explanation

For a bond with an embedded call option, the OAS is less than its zero-volatility spread by the option cost. Therefore, the zero-volatility spread is greater than the OAS for callable bonds. If the embedded call option has any value to the issuer, a callable bond with an OAS of 75 basis points will have a *Z*-spread that is greater than 75 basis points.

Because the OAS represents the bond's spread to the spot yield curve excluding the effect of the embedded option, it does not include any compensation for the volatility risk related to the option. The implied cost of an embedded option is the difference between the bond's zero-volatility spread (not the nominal spread) and its OAS.

(Module 55.1, LOS 55.b)

Question #37 of 56

Question ID: 1574265

The bonds of Grinder Corp. trade at a G-spread of 150 basis points above comparable maturity U.S. Treasury securities. The option adjusted spread (OAS) on the Grinder bonds is 75 basis points. Using this information, and assuming that the Treasury yield curve is flat:

A) the zero-volatility spread is 75 basis points. ✗

B) the zero-volatility spread is 225 basis points. ✗

C) the option cost is 75 basis points. ✓

Explanation

The option cost is the difference between the zero volatility spread and the OAS, or 150 − 75 = 75 bp. With a flat yield curve, the G-spread and zero volatility spread will be the same.

(Module 55.1, LOS 55.b)

Question #38 of 56

Question ID: 1574238

A 20-year, $1,000 face value, 10% semi-annual coupon bond is selling for $875. The bond's yield to maturity is:

A) 11.43%. ✗

B) 5.81%. ✗

C) 11.62%. ✓

Explanation

N = 40 (2 × 20 years); PMT = 50 (0.10 × 1,000) / 2; PV = -875; FV = 1,000; CPT → I/Y = 5.811 × 2 (for annual rate) = 11.62%.

(Module 55.1, LOS 55.a)

Question #39 of 56

Question ID: 1576480

A five-year bond with a 7.75% semiannual coupon currently trades at 101.245% of a par value of $1,000. Which of the following is *closest* to the current yield on the bond?

A) 7.53%. ✗

B) 7.65%. ✓

C) 7.75%.

Explanation

The current yield is computed as: (Annual Cash Coupon Payment) / (Current Bond Price). The annual coupon is: ($1,000)(0.0775) = $77.50. The current yield is then: ($77.50) / ($1,012.45) = 0.0765 = 7.65%.

(Module 55.1, LOS 55.a)

Question #40 of 56

Question ID: 1574262

Bond X is a noncallable corporate bond maturing in ten years. Bond Y is also a corporate bond maturing in ten years, but Bond Y is callable at any time beginning three years from now. Both bonds carry a credit rating of AA. Based on this information:

A) Bond Y will have a higher zero-volatility spread than Bond X.

B) The option adjusted spread of Bond Y will be greater than its zero-volatility spread.

C) The zero-volatility spread of Bond X will be greater than its option-adjusted spread.

Explanation

Bond Y will have the higher Z-spread due to the call option embedded in the bond. This option benefits the issuer, and investors will demand a higher yield to compensate for this feature. The option-adjusted spread removes the value of the option from the spread calculation, and would always be less than the Z-spread for a callable bond. Since Bond X is noncallable, the Z-spread and the OAS will be the same.

(Module 55.1, LOS 55.b)

Question #41 of 56

Question ID: 1574249

A stated interest rate of 9% compounded quarterly results in an effective annual rate *closest to*:

A) 9.4%.

B) 9.3%.

C) 9.2%.

Explanation

Quarterly rate = 0.09 / 4 = 0.0225.

Effective annual rate = $(1 + 0.0225)^4 - 1 = 0.09308$, or 9.308%.

(Module 55.1, LOS 55.a)

Question #42 of 56

Question ID: 1576473

Which of the following describes the yield to worst? The:

A) lowest of all possible yields to call.

B) lowest of all possible prices on the bond.

C) yield given default on the bond.

Explanation

Yield to worst involves the calculation of yield to call for every possible call date, and determining which of these results in the lowest expected return.

(Module 55.1, LOS 55.a)

Question #43 of 56

Question ID: 1576483

A semiannual-pay bond is callable in five years at $1,080. The bond has an 8% coupon and 15 years to maturity. If an investor pays $895 for the bond today, the yield to call is *closest to*:

A) 10.2%.

B) 12.1%.

C) 9.3%.

Explanation

YTC: N = 10; PV = –895; PMT = 80 / 2 = 40; FV = 1080; CPT → I/Y = 6.035 × 2 = 12.07%.

(Module 55.1, LOS 55.a)

Question #44 of 56

Question ID: 1574247

Consider a bond selling for $1,150. This bond has 28 years to maturity, pays a 12% annual coupon, and is callable in 8 years for $1,100. The yield to maturity is *closest to*:

A) 10.34%. ✓

B) 10.55%. ✗

C) 9.26%. ✗

Explanation

N = 28; PMT = 120; PV = –1,150; FV = 1,000; CPT I/Y = 10.3432.

(Module 55.1, LOS 55.a)

Question #45 of 56

Question ID: 1574236

What is the yield to maturity (YTM) on a semiannual-bond basis of a 20-year, U.S. zero-coupon bond selling for $300?

A) 3.06%. ✗

B) 6.11%. ✓

C) 7.20%. ✗

Explanation

N = 40; PV = –300; FV = 1,000; CPT → I = 3.055 × 2 = 6.11.

(Module 55.1, LOS 55.a)

Question #46 of 56

Question ID: 1574254

What is the effective annual rate if the stated rate is 12% compounded quarterly?

A) 12.55%. ✓

B) 11.49%. ✗

C) 57.35%. ✗

Explanation

If the stated rate is 12%, then the effective quarterly (period) rate is 12% / 4 = 3%

The effective annual rate is, therefore, (1 + period rate)$^{\#\ \text{periods in a year}}$ – 1

EAR = $[1 + (0.12 / 4)]^4 - 1 = 12.55\%$

(Module 55.1, LOS 55.a)

Question #47 of 56

Question ID: 1576471

A 12% coupon bond with semiannual payments is callable in 5 years. The call price is $1,120. If the bond is selling today for $1,110, what is the yield-to-call?

A) 10.25%. ✗

B) 10.95%. ✓

C) 11.25%. ✗

Explanation

PMT = 60; N = 10; FV = 1,120; PV = –1,110; CPT → I = 5.47546

(5.47546)(2) = 10.95

(Module 55.1, LOS 55.a)

Question #48 of 56

Question ID: 1574259

The zero volatility spread (Z-spread) is the spread that:

A) is added to each spot rate on the government yield curve that will cause the present value of the bond's cash flows to equal its market price. ✓

B) is added to the yield to maturity of a similar maturity government bond to equal the yield to maturity of the risky bond. ✗

C) results when the cost of the call option in percent is subtracted from the option adjusted spread. ✗

Explanation

The zero volatility spread (Z-spread) is the interest rate that is added to each zero-coupon bond spot rate that will cause the present value of the risky bond's cash flows to equal its market value. The nominal spread is the spread that is added to the YTM of a similar maturity government bond that will then equal the YTM of the risky bond. The zero volatility spread (Z-spread) is the spread that results when the cost of the call option in percent is added to the option adjusted spread.

(Module 55.1, LOS 55.b)

Question #49 of 56

Question ID: 1574244

A bond with a 12% semiannual coupon is currently trading at 102.25 per 100 of face value and has seven years to maturity. Which of the following is *closest* to the yield to maturity (YTM) on the bond?

A) 11.21%. ✗

B) 11.52%. ✓

C) 11.91%. ✗

Explanation

To find the YTM, enter PV = –$1,022.50; PMT = $60; N = 14; FV = $1,000; CPT → I/Y = 5.76%. Now multiply by 2 for the semiannual coupon payments: (5.76)(2) = 11.52%.

(Module 55.1, LOS 55.a)

Question #50 of 56

Question ID: 1576481

Consider a bond selling for $1,150. This bond has 28 years to maturity, pays a 12% annual coupon, and is callable in 8 years for $1,100. The yield to call is *closest to*:

A) 10.05%. ✓

B) 10.55%. ✗

C) 9.25%. ✗

Explanation

N = 8; PMT = 120; PV = -1,150; FV = 1,100; CPT I/Y = 10.0554.

(Module 55.1, LOS 55.a)

Question #51 of 56

Question ID: 1574266

For a callable bond, the option-adjusted spread (OAS):

A) is less than the zero-volatility spread. ✓

B) is greater than the zero-volatility spread. ✗

C) can be greater than or equal to the zero-volatility spread. ✗

Explanation

For a callable bond, the OAS is less than the zero-volatility spread because of the extra yield required to compensate the bondholder for the call option.

(Module 55.1, LOS 55.b)

Question #52 of 56

Question ID: 1574242

A 20-year, 9% semi-annual coupon bond selling for $914.20 offers a yield to maturity of:

A) 8%. ✗

B) 10%. ✓

C) 9%. ✗

Explanation

N = 40; PMT = 45; PV = -914.20; FV = 1,000; CPT → I/Y = 5%

YTM = 5% × 2 = 10%

(Module 55.1, LOS 55.a)

Question #53 of 56

Question ID: 1576479

A $1,000 par value, 10% annual coupon bond with 15 years to maturity is priced at $951. The bond's yield to maturity is:

A) less than its current yield. ✗

B) greater than its current yield.

C) equal to its current yield.

Explanation

The bond's YTM is:

N = 15; PMT = 100; PV = –951; FV = 1,000; CPT I/Y = 10.67%

Current Yield = annual coupon payment / bond price

CY = 100 / $951 = 0.1051 or 10.51%

(Module 55.1, LOS 55.a)

Question #54 of 56

Question ID: 1576476

A 20 year, 8% semi-annual coupon, $1,000 par value bond is selling for $1,100. The bond is callable in 4 years at $1,080. What is the bond's yield to call?

A) 6.87.

B) 7.21.

C) 8.13.

Explanation

n = 4(2) = 8; PMT = 80/2 = 40; PV = -1,100; FV = 1,080

Compute YTC = 3.435(2) = 6.87%

(Module 55.1, LOS 55.a)

Question #55 of 56

Question ID: 1574243

A 20-year, 10% semi-annual coupon bond selling for $925 has a yield to maturity (YTM) of:

A) 10.93%.

B) 11.23%.

C) 9.23%.

Explanation

N = 40, PMT = 50, PV = -925, FV = 1,000, CPT I/Y = 5.4653 × 2 = 10.9305.

(Module 55.1, LOS 55.a)

Question #56 of 56

Question ID: 1576478

A 30-year, 10% annual coupon bond is sold at par. It can be called at the end of 10 years for $1,100. What is the bond's yield to call (YTC)?

A) 10.6%.

B) 10.0%.

C) 8.9%.

Explanation

N = 10; PMT = 100; PV = –1,000; FV = 1,100; CPT → I = 10.6.

(Module 55.1, LOS 55.a)