7.06 Fixed-Income Bond Valuation Prices and Yields

Question 1
On August 8, 20X0, an investor buys a 6.4%, semiannual-paying bond with a YTM of 5.2%. The bond matures on December 15, 20X2 and pays coupon interest each June 15 and December 15. The bond trades on a 30/360 basis. If the dealer quotes a price of 102.62 per 100 of par value, the bond's flat price on August 8, 20X0 is *closest* to:
A. 101.68
B. 102.62
C. 103.56

Question 2
A bond originally issued with a 7-year maturity now has 3 years remaining to maturity. The bond has a 5% coupon rate and pays interest semiannually. If the YTM is 4%, the bond's price per 100 par value is *closest* to:
A. 101.44
B. 102.80
C. 106.05

Question 3
A bond with 4 years until maturity has a 3.5% annual-pay coupon. If the bond's price per 100 par value is 81.50, the implied market discount rate is *closest* to:
A. 1.27%.
B. 9.24%.
C. 13.09%.

Question 4
An analyst uses matrix pricing to estimate the YTM of an illiquid, 5-year corporate bond that pays a 7% annual coupon. The analyst compares two publicly traded bonds of similar credit quality, as show in the image below:

	Bond X	Bond Y
Price per 100 par	98	97
Annual coupon	7%	8%
Time to maturity	4 years	6 years

Based on this data, the estimated YTM of the illiquid bond is *closest* to:
A. 4.06%
B. 7.50%
C. 8.13%

Question 5
A bond that matures in four years has a 5% annual coupon rate with interest paid semiannually. If the market discount rate for the bond is 4.50%, the price of the bond per 100 of par is *closest* to:
A. 98.2075
B. 101.7938
C. 101.8118

Question 6
A bond with a 4% coupon rate pays interest annually and matures in 12 years. If the required rate of return on the bond is 5%, the price per 100 of par value is *closest* to:
A. 91.0575
B. 91.1367
C. 109.3851

Question 7
An analyst obtains the following information on a government bond:

Bond Data	
Annual coupon rate	4.00%
YTM	5.00%
Payment frequency	Semiannual
Payment dates	15 January, 15 July
Maturity date	15 January 2030
Day-count convention	Actual/actual

Assuming a trade settlement date of 9 November 2020, the amount of accrued interest per 100 of par value is *closest* to:
A. 1.27
B. 1.59
C. 2.54

Question 8
Using matrix pricing to value a bond, the applicable discount rate is *most appropriately* estimated using:
A. spot rates.
B. yields on similar bonds.
C. spreads above benchmark government bond yields.

Question 9

A bondholder receives a coupon payment for a semiannual-paying bond on July 15, 20X3 and then sells the bond on November 20 of the same year. If the bond uses a 30/360 day-count convention and the settlement date and sale date are the same, the number of days of accrued interest is *closest* to:

A. 120
B. 125
C. 128

Question 10

All else being equal, as soon as the coupon on a bond is paid, the quoted price of that bond from a bond dealer will *most likely*:

A. decrease.
B. remain the same.
C. increase.

Question 11

 A 6% coupon bond pays interest each January 15 and July 15 and matures on July 15, 20X1. Its yield-to-maturity is 5% and it uses an actual/actual day-count convention. On October 3, 20X0, the bond's full price per 100 par value is *closest* to:

A. 100.96
B. 102.05
C. 103.14

Question 12

A bond with 5 years until maturity has a 3.5% annual-pay coupon. If the yield to maturity (YTM) is 2.75% and the risk-free rate is 2%, the bond's price per 100 par value is *closest* to:

A. 103.46
B. 103.48
C. 107.07

Question 13

A bond with 3 years to maturity has a 4% coupon rate and pays interest semiannually. If the market discount rate is 5.5%, the bond's price per 100 par value is *closest* to:

A. 95.90
B. 95.95
C. 97.86

Question 14

On May 22, 20X0, a 4.5% corporate bond has accrued interest of 0.8375 per 100 par value and is quoted at 98.24 per 100 par value. The bond's flat price (per 100 of par value) on May 22, 20X0 is *closest* to:

A. 97.40
B. 98.24
C. 99.08

Question 15
A bond with four years until maturity has an 8% coupon rate and pays interest annually. If the required YTM is 7%, the price of the bond per 100 of par value is *closest* to:
A. 96.68
B. 100.00
C. 103.39

Question 16
Matrix pricing estimates the price of an inactively traded bond by comparing it with bonds with similar characteristics. Matrix pricing is *most appropriately* used to price an inactively traded bond by averaging the comparable bonds':
A. yields.
B. credit risk.
C. coupon rates.

Question 17
A bond with 2 years to maturity has a market discount rate of 5.6% and a par value of 100. If the bond's annual 5% coupon is paid quarterly, its price per 100 par value is *closest* to:
A. 89.03
B. 98.87
C. 98.89

Question 18
An underwriter wants to estimate the offering price on a new issue for a 2-year bond with an 8.5% coupon rate that pays interest semiannually. The underwriter gathers comparative information on two publicly traded corporate bonds, Bonds Y and Z, with the same maturity and similar credit quality:

	Bond Y	Bond Z
Price per 100 par	103.5	104.0
Coupon rate (paid semiannually)	7.5%	8.0%
Time to maturity	2 years	2 years

The estimate of the new bond issue's price using matrix pricing is *closest* to:
A. 103.7503
B. 105.1310
C. 105.1486

Question 19
An analyst gathers the following information about two bonds:

Bond	Time to maturity (years)	Coupon frequency	Coupon rate (%)
X	2	Semiannual	6.00
Y	2	Semiannual	3.00

If the applicable market discount rate for both bonds is 5%, the price difference between them is *closest* to:
A. 5.31
B. 5.57
C. 5.64

Question 20

An analyst gathers information for two bonds. Both mature at the same time and have identical yields-to-maturity (YTM). Bond A pays an annual coupon of 3.5%, and Bond B pays an annual coupon of 6.0%. If the YTM for bonds with these maturities increases, Bond A's percentage change in price will *most likely* be:
A. less than the percentage change in Bond B's price.
B. equal to the percentage change in Bond B's price.
C. greater than the percentage change in Bond B's price.

Question 21

A bond has the following characteristics:

Annualized coupon rate	4.00%
Coupon frequency	Semiannual
Time to maturity	2 years, 75 days
Day-count convention	30/360
Annualized YTM	3.50%

If the next coupon payment is due in 75 days, the bond's flat price is *closest* to:
A. 100.02
B. 101.05
C. 101.09

Question 22

A bond with 5 years to maturity has a 4.5% coupon rate and pays interest semiannually. If the bond's price per 100 par value is 97.80, the bond's YTM is *closest* to:

A. 2.5%
B. 2.7%
C. 5.0%

Question 23

A zero-coupon bond has 5 years to maturity. If the market discount rate is 6%, and assuming semiannual compounding, the bond's price per 100 of par value is *closest* to:
A. 55.84
B. 74.41
C. 86.26

Question 24

An analyst wishes to estimate the market price of Bond X, an inactively traded bond, and gathers information on four comparable, actively traded bonds. Using matrix pricing, the analyst *most appropriately* uses the:
A. YTMs of the comparable bonds to estimate the YTM of Bond X.
B. prices of the comparable bonds to estimate the YTM of Bond X.
C. prices of the comparable bonds as an estimate of the price of Bond X.

Question 25

A 12%, semiannual coupon bond with face value of CNY 1,000 pays interest each year on March 30 and September 30. Assuming a 30/360 day-count convention, a bond that is sold and settled on August 20 will have accrued interest *closest* to:
A. CNY 46.63
B. CNY 46.67
C. CNY 47.67

Question 26

A noncallable bond is currently trading at par. Its required yield-to-maturity (YTM) falls by 10 basis points (bps) and its new price is 101. If its YTM had instead increased by 10 bps, which of the following would be the *best* estimate of its price?
A. 98.35
B. 98.95
C. 99.20

Question 27

A bond with 3 years until maturity has a 6% annual coupon paid quarterly. If the bond's price per 100 par value is 92.31, the implied annual market discount rate is *closest* to:
A. 2.24%
B. 4.29%
C. 8.95%

Question 28

An analyst gathers information for the following bonds:

Bond	Coupon	Maturity (years)	YTM
A	0%	20	20%
B	10%	20	20%
C	25%	20	20%
D	0%	30	20%
E	10%	30	20%
F	25%	30	20%

If yield-to-maturity (YTM) increases by 100 basis points for all bonds, the exception to the maturity effect *most likely* means, in terms of absolute percentage price change, that:
A. Bond A's change is higher than Bond D's.
B. Bond B's change is higher than Bond E's.
C. Bond C's change is higher than Bond F's.