Money and Banking

Homework #3

Due on Jan. 3, 2022

1) The present value of an expected future payment \_\_\_\_\_\_\_\_ as the interest rate increases.

A) falls

B) rises

C) is constant

D) is unaffected

Answer: A

2) What is the present value of $500.00 to be paid in two years if the interest rate is 5 percent?

A) $453.51

B) $500.00

C) $476.25

D) $550.00

Answer: A

3) If a security pays $55 in one year and $133 in three years, its present value is $150 then the interest rate is

A) 5 percent.

B) 10 percent.

C) 12.5 percent.

D) 15 percent.

Answer: B

4) A credit market instrument that requires the borrower to make the same payment every period until the maturity date is known as a

A) simple loan.

B) fixed-payment loan.

C) coupon bond.

D) discount bond.

Answer: B

5) A credit market instrument that pays the owner a fixed coupon payment every year until the maturity date and then repays the face value is called a

A) simple loan.

B) fixed-payment loan.

C) coupon bond.

D) discount bond.

Answer: C

6) The \_\_\_\_\_\_\_\_ is the final amount that will be paid to the holder of a coupon bond.

A) discount value

B) coupon value

C) face value

D) present value

Answer: C

7) An $8,000 coupon bond with a $400 coupon payment every year has a coupon rate of

A) 5 percent.

B) 8 percent.

C) 10 percent.

D) 40 percent.

Answer: A

8) A \_\_\_\_\_\_\_\_ is bought at a price below its face value, and the \_\_\_\_\_\_\_\_ value is repaid at the maturity date.

A) coupon bond; discount

B) discount bond; discount

C) coupon bond; face

D) discount bond; face

Answer: D

9) For a 3-year simple loan of $10,000 at 10 percent, the amount to be repaid is

A) $10,030.

B) $10,300.

C) $13,000.

D) $13,310.

Answer: D

10) If a security pays $110 next year and $121 the year after that, what is its yield to maturity if it sells for $200?

A) 9 percent

B) 10 percent

C) 11 percent

D) 12 percent

Answer: B

10) The price of a coupon bond and the yield to maturity are \_\_\_\_\_\_\_\_ related; that is, as the yield to maturity \_\_\_\_\_\_\_\_, the price of the bond \_\_\_\_\_\_\_\_.

A) positively; rises; rises

B) negatively; falls; falls

C) positively; rises; falls

D) negatively; rises; falls

Answer: D

11) A $10,000 8 percent coupon bond that sells for $10,000 has a yield to maturity of

A) 8 percent.

B) 10 percent.

C) 12 percent.

D) 14 percent.

Answer: A

12) Which of the following $5,000 face-value securities has the highest yield to maturity?

A) A 6 percent coupon bond selling for $5,000

B) A 6 percent coupon bond selling for $5,500

C) A 10 percent coupon bond selling for $5,000

D) A 12 percent coupon bond selling for $4,500

Answer: D

13) Which of the following bonds would you prefer to be buying?

A) A $10,000 face-value security with a 10 percent coupon selling for $9,000

B) A $10,000 face-value security with a 7 percent coupon selling for $10,000

C) A $10,000 face-value security with a 9 percent coupon selling for $10,000

D) A $10,000 face-value security with a 10 percent coupon selling for $10,000

Answer: A

14) A consol paying $20 annually when the interest rate is 5 percent has a price of

A) $100.

B) $200.

C) $400.

D) $800.

Answer: C

15) A discount bond selling for $15,000 with a face value of $20,000 in one year has a yield to maturity of

A) 3 percent.

B) 20 percent.

C) 25 percent.

D) 33.3 percent.

Answer: D

16) If the interest rate is 5%, what is the present value of a security that pays you $1,050 next year and $1,102.50 two years from now? If this security sold for $2200, is the yield to maturity greater or less than 5%? Why?

Answer:

PV=$1050/(1+0.05)+$1102.5/((1+0.5)^2)

PV=2000

If this security sold for $2200, the yield to maturity is less than 5%. The lower the interest rate the higher the present value.

17) Which of the following are true concerning the distinction between interest rates and returns?

A) The rate of return on a bond will not necessarily equal the interest rate on that bond.

B) The return can be expressed as the difference between the current yield and the rate of capital gains.

C) The rate of return will be greater than the interest rate when the price of the bond falls between time t and time t + 1.

D) The return can be expressed as the sum of the discount yield and the rate of capital gains.

Answer: A

18) Suppose you are holding a 5 percent coupon bond maturing in one year with a yield to maturity of 15 percent. If the interest rate on one-year bonds rises from 15 percent to 20 percent over the course of the year, what is the yearly return on the bond you are holding?

A) 5 percent

B) 10 percent

C) 15 percent

D) 20 percent

Answer: C

19) If the interest rates on all bonds rise from 5 to 6 percent over the course of the year, which bond would you prefer to have been holding?

A) A bond with one year to maturity

B) A bond with five years to maturity

C) A bond with ten years to maturity

D) A bond with twenty years to maturity

Answer: A

20) Which of the following are generally true of bonds?

A) The only bond whose return equals the initial yield to maturity is one whose time to maturity is the same as the holding period.

B) A rise in interest rates is associated with a fall in bond prices, resulting in capital gains on bonds whose terms to maturity are longer than the holding periods.

C) The longer a bond's maturity, the smaller is the size of the price change associated with an interest rate change.

D) Prices and returns for short-term bonds are more volatile than those for longer-term bonds.

Answer: A

21) Which of the following are generally true of all bonds?

A) The longer a bond's maturity, the greater is the rate of return that occurs as a result of the increase in the interest rate.

B) Even though a bond has a substantial initial interest rate, its return can turn out to be negative if interest rates rise.

C) Prices and returns for short-term bonds are more volatile than those for longer term bonds.

D) A fall in interest rates results in capital losses for bonds whose terms to maturity are longer than the holding period.

Answer: B

20) The \_\_\_\_\_\_\_\_ interest rate more accurately reflects the true cost of borrowing.

A) nominal

B) real

C) discount

D) market

Answer: B

21) When the \_\_\_\_\_\_\_\_ interest rate is low, there are greater incentives to \_\_\_\_\_\_\_\_ and fewer incentives to \_\_\_\_\_\_\_\_.

A) nominal; lend; borrow

B) real; lend; borrow

C) real; borrow; lend

D) market; lend; borrow

Answer: C

22) In which of the following situations would you prefer to be the borrower?

A) The interest rate is 9 percent and the expected inflation rate is 7 percent.

B) The interest rate is 4 percent and the expected inflation rate is 1 percent.

C) The interest rate is 13 percent and the expected inflation rate is 15 percent.

D) The interest rate is 25 percent and the expected inflation rate is 50 percent.

Answer: D

23) If you expect the inflation rate to be 15 percent next year and a one-year bond has a yield to maturity of 7 percent, then the real interest rate on this bond is

A) 7 percent.

B) 22 percent.

C) -15 percent.

D) -8 percent.

Answer: D

24) Assuming the same coupon rate and maturity length, when the interest rate on a Treasury Inflation Protected Security is 3 percent, and the yield on a nonindexed Treasury bond is 8 percent, the expected rate of inflation is

A) 3 percent.

B) 5 percent.

C) 8 percent.

D) 11 percent.

Answer: B