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Coverage: Valuation of Stocks and Bonds, Discounted Cash Flow Valuation, and Long Term Debt Characteristics. Please choose the best possible answer to the following questions. Completed exams and scan sheets will be due at the beginning of class on March 7, 2011.

True	/False
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Indicate	e wh	nether the statement is true or false.			
	1.	Suppose an investor plans to invest a given sum of money. She can earn an effective annual rate of 5% on Security A, while Security B will provide an effective annual rate of 12%. Within 11 years' time, the compounded value of Security B will be more than twice the compounded value of Security A. (Ignore risk, and assume that compounding occurs daily.)			
	2.	A bond that had a 20-year original maturity with 1 year left to maturity has more interest rate price risk than a 10-year original maturity bond with 1 year left to maturity. (Assume that the bonds have equal default risk and equal coupon rates, and they cannot be called.)			
	3.	The cash flows associated with common stock are more difficult to estimate than those related to bonds because stocks only have residual claims against the company.			
	4.	4. A call provision gives bondholders the right to demand, or "call for," repayment of a bond. Typically, calls are exercised if interest rates rise, because when rates rise the bondholder can get the principal amount back and reinvest it elsewhere at higher rates.			
	5.	Sinking funds are devices used to force companies to retire bonds on a scheduled basis prior to their maturity. Many bond indentures allow the company to acquire bonds for a sinking fund by either purchasing bonds in the market or selecting the bonds to be acquired by a lottery administered by the trustee through a call at face value.			
	6.	For bonds, price sensitivity to a given change in interest rates is generally greater the longer before the bond matures.			
	7.	. As a general rule, a company's debentures have higher required interest rates than its mortgage bonds becaumortgage bonds are backed by specific assets while debentures are unsecured.			
Multip <i>Identify</i>		Choice choice that best completes the statement or answers the question.			
	8.	 You are analyzing the value of a potential investment by calculating the sum of the present values of its expected cash flows. Which of the following would <u>lower</u> the calculated value of the investment? a. The cash flows are in the form of a deferred annuity, and they total to \$100,000. You learn that the annuity lasts for only 5 rather than 10 years, hence that each payment is for \$20,000 rather than for \$10,000. b. The discount rate <u>increases</u>. c. The riskiness of the investment's cash flows <u>decreases</u>. d. The total amount of cash flows remains the same, but more of the cash flows are received in the earlier years and less are received in the later years. e. The discount rate <u>decreases</u>. 			

9. Which of the following bank accounts has the highest effective annual return?
a. An account that pays 8% nominal interest with monthly compounding.

	 b. An account that pays 8% nominal interest with annual compounding. c. An account that pays 7% nominal interest with daily (365-day) compounding. d. An account that pays 7% nominal interest with monthly compounding. e. An account that pays 8% nominal interest with daily (365-day) compounding.
10.	A Treasury bond promises to pay a lump sum of \$1,000 exactly 3 years from today. The nominal interest rate is 6%, semiannual compounding. Which of the following statements is CORRECT? a. The periodic interest rate is greater than 3%. b. The periodic rate is less than 3%. c. The present value would be greater if the lump sum were discounted back for more periods. d. The present value of the \$1,000 would be smaller if interest were compounded monthly rather than semiannually. e. The PV of the \$1,000 lump sum has a higher present value than the PV of a 3-year, \$333.33 ordinary annuity.
 11.	Last year Toto Corporation's sales were \$225 million. If sales grow at 6% per year, how large (in millions) will they be 5 years later? a. \$271.74 b. \$286.05 c. \$301.10 d. \$316.16 e. \$331.96
 12.	Suppose the U.S. Treasury offers to sell you a bond for \$747.25. No payments will be made until the bond matures 5 years from now, at which time it will be redeemed for \$1,000. What interest rate would you earn if you bought this bond at the offer price? a. 4.37% b. 4.86% c. 5.40% d. 6.00% e. 6.60%
 13.	Ten years ago, Levin Inc. earned \$0.50 per share. Its earnings this year were \$2.20. What was the growth rate in Levin's earnings per share (EPS) over the 10-year period? a. 15.17% b. 15.97% c. 16.77% d. 17.61% e. 18.49%
14.	An investment promises the following cash flow stream: \$750 at Time 0; \$2,450 at the end of Year 1 (or at t = 1); \$3,175 at the end of Year 2; and \$4,400 at the end of Year 3. At a discount rate of 8.0%, what is the present value of the cash flow stream? a. \$7,916.51 b. \$8,333.17 c. \$8,771.76 d. \$9,233.43 e. \$9,695.10
 15.	Your uncle has \$300,000 invested at 7.5%, and he now wants to retire. He wants to withdraw \$35,000 at the end of each year, beginning at the end of this year. He also wants to have \$25,000 left to give you when he ceases to withdraw funds from the account. For how many years can he make the \$35,000 withdrawals and still have \$25,000 left in the end? a. 14.21 b. 14.96

	c. 15.71	
	d. 16.49	
	e. 17.32	
 16.	Your uncle has \$300,000 invested at 7.5%, and he now wants to retire. He wants to withdraw \$35,000 at the beginning of each year, beginning immediately. He also wants to have \$25,000 left to give you when he	
	ceases to withdraw funds from the account. For how many years can he make the \$35,000 withdrawals and	
still have \$25,000 left in the end?		
	a. 11.98	
	b. 12.61	
	c. 13.27	
	d. 13.94	
	e. 14.63	
 17.	Suppose you are buying your first house for \$210,000, and are making a \$20,000 down payment. You have	
	arranged to finance the remaining amount with a 30-year, monthly payment, amortized mortgage at a 6.5%	
	nominal interest rate. What will your equal monthly payments be?	
	a. \$1,083.84	
	b. \$1,140.88	
	c. \$1,200.93	
	d. \$1,260.98	
10	e. \$1,324.02	
 18.	You decide to purchase a \$210,000 home making a \$20,000 downpayment. You secure a 6.5% fixed rate, 30	
	year mortgage on the balance. 10 years later when interest rates have dropped to 5%, you decide to refinance. What is the amount of the outstanding loan balance at the time of refinancing?	
	remainee. What is the amount of the outstanding foan barance at the time of remaining?	
	a. \$161,074.74 c. \$154,293.17	
	b. \$130,258.90 d. \$134,287.14	
19.	Your company has just taken out a 1-year installment loan for \$72,500. The nominal rate is 12.0%, but with	
	equal end-of-month payments. What percentage of the <u>2nd</u> monthly payment will go toward the repayment of	
	principal?	
	a. 73.01%	
	b. 76.85%	
	c. 80.89%	
	d. 85.15%	
20	e. 89.63%	
 20.	Which of the following events would make it more likely that a company would choose to call its outstanding	
	callable bonds? a. The company's bonds are downgraded.	
	a. The company's bonds are downgraded.b. Market interest rates rise sharply.	
	c. Market interest rates decline sharply.	
	d. The company's financial situation deteriorates significantly.	
	e. Inflation increases significantly.	
21.	Which of the following bonds would have the greatest percentage increase in value if all interest rates <u>fall</u> by	
	1%?	
	a. 10-year, zero coupon bond.	
	b. 20-year, 10% coupon bond.	
	c. 20-year, 5% coupon bond.	
	d. 1-year, 10% coupon bond.	
	e. 20-year, zero coupon bond.	

2	1. In 1981, when interest rates were at 13.5% on U.S. long term bonds, and gas prices were at all time highs, you decided to invest in gold as a store of value. You purchased 10 gold 1 oz. Kugerrands for \$475 each. In 2008, some 27 years later, when gas prices were once again reaching all time highs, but interest rates on U.S. long term bonds were near a record low of 4%, you sell the gold Kugerrands at \$900 a piece. Ignoring commissions, and storage fees, what was your return on investment from this activity?				
		c. 5.065% d. 2.395%			
2	3. In 1981, when interest rates were 13.5% on I that produced \$500 a year in interest, and just	1, when interest rates were 13.5% on long term bonds, you decided to purchase a \$5,000 bond oduced \$500 a year in interest, and just matured this year \$5,000. Back in 1981, 27 years ago, inchased this bond at a discounted price of \$4,750. Ignoring commissions, what was your rate			
		e. 5.231% d. 2.395%			
2	4. In 1981, when interest rates, gas prices and usefalling, you decided to purchase 100 shares of GE stock split 2 for 1 in 1994, 2 for 1 in 1994 purchased in 1981 you now have 1200 share dividend with a yield of average of 2.5%, so \$118.75 [which is somewhat understated because of the content of the cont	in 1981, when interest rates, gas prices and unemployment were high, and the stock market was alling, you decided to purchase 100 shares of GE stock at \$47.50 per share. Over the next 27 years, GE stock split 2 for 1 in 1994, 2 for 1 in 1997 and 3 for 1 in 2000. So in 2008, from the 100 shares urchased in 1981 you now have 1200 shares of GE. During this same period GE produced a small ividend with a yield of average of 2.5%, so for simplicity, assume that each year you received 118.75 [which is somewhat understated because GE dividends were increased periodically] on your GE stock holding. If you sold all your GE shares today at \$33.50 per share, what would have been			
		e. 7.025% d. 2.395%			
2	5. In 1998, the business school of U and I recei Good Night Fast Food Chain to allow studer invest in the market. The results of this inve a faculty member asked for a report on the v funds, pension plans, insurance companies a periodically, why should a university fund decentric description.	ved a donation of \$100,000 from the Go Gently into that hts, with the help of some remarkable CFA advisors to estment activity were kept secret for 9 years, but in 2007 alue of the fund. The faculty member argued that trust and other fiduciaries were required to report their results esigned to teach students about investing be exempt? stment fund stood at \$126,000. What was the return on			
		e. 2.601% d. 2.395%			
2	6. In 1998, a secretary in the provost's office of lost cousin. She decided to invest the \$100,	f U and I received a \$100,000 inheritance from her long 000 in a par value \$100,000 Wells Fargo bond paying the bond matures in 2007, what was her return on			
		c. 2.601% d. 2.395%			

27. In 1998, you receive a \$100,000 inheritance. Noting that the internet bubble is bursting and everyone wants to get out of technology, you decide to purchase 2000 shares of Intel at \$16/share, 1000 shares of Cisco at \$17/share and 1000 shares of Microsoft at \$25/share. The total cost of this investment ignoring commissions is \$74,000 leaving a cash position of \$26,000 [26% of the portfolio]. If you liquidate the position in 2007, the stock prices are as follows: Intel - \$32/share; Cisco - \$26/share; Microsoft - \$30/share. During this 9 year period these companies paid small dividends which will be ignored for simplicity. Also, there was small amount of annual interest on \$26,000 cash position. Assume that the cash position accumulated interest at 4% compounded annually. Based on the capital appreciation of the securities and the interest on cash, what was the rate of return on this portfolio?

a. 5.14% c. 7.025% b. 4.75% d. 8.346%

28. Jersey City Trucking is financing a new truck with a loan of \$10,000 to be repaid in annual end-of-year installments of \$2,504.56. What annual interest rate is the company paying?

a. 7% c. 9% d. 10%

29. Your Cedar Falls lease provides for payments of \$500 at the end of each month for the next 12 months. However, your landlord offers you a new 1-year lease arrangement that calls for zero rent for the next 3 months, then rental payments of \$700 at the end of each month for the next 9 months. You keep you money in a local bank savings account that pays a nominal annual rate of 5%. By what amount would you be saving if you accepted the new lease over the old one?

a. -\$253.62 the new lease is less favorable c. +253.62 b. +\$135.24 d. -\$509.81

30. In order to determine the capital structure of ABC Finance, it is necessary to convert its balance sheet figures to a market value basis. The right hand side of ABC's balance sheet as of today, February 24, 2008, is as follows:

Long-term debt (bonds, at par) \$10 million
Preferred Stock \$2 million
Common Stock (\$10 par) \$10 million
Retained Earnings \$4 million
Total Liabilities and Net Worth \$26 million

ABC's bonds have a 4% coupon rate, are payable semiannually, and carry a par value of \$1,000. They are set to mature on February 24, 2018. The yield to maturity is 12%. What is the current market value of the firm's debt?

a. \$5,412,000 c. \$5,062,104 b. \$5,237,102 d. \$5,183,291

- 31. The expected return on Northeast Corporation's stock is 14%. The stock's dividend is expected to grow at a constant rate of 8%, and it currently sells for \$50 a share. Which of the following statements is CORRECT?
 - a. The stock's dividend yield is 7%.
 - b. The stock's dividend yield is 8%.
 - c. The current dividend per share is \$4.00.
 - d. The stock price is expected to be \$54 a share one year from now.
 - e. The stock price is expected to be \$57 a share one year from now.

 32.	A stock is expected to pay a dividend of \$0.75 at the end of the year. The required rate of return is r_s = 12.5%, and the expected constant growth rate is g = 8.5%. What is the current stock price? a. \$17.82 b. \$18.28 c. \$18.75 d. \$19.22 e. \$19.70
 33.	If D_1 = \$1.75, g (which is constant) = 4.5%, and P_0 = \$46, what is the stock's expected dividend yield for the coming year? a. 3.26% b. 3.43% c. 3.61% d. 3.80% e. 3.99%