

National Cheng Kung University
Department of accounting
Graduate School Admission Exam, Spring 1995
Subject: Finance

Instruction: There are 20 multiple-choice questions and three short-essay questions in this exam. Multiple question is 3 points each. Please confront short-essay questions directly. No credit will be given for even cogent analysis of a question unasked.

I. Multiple Choice: (choose the best answer.)

1. Which of the following investment positions should have the highest instantaneous Beta?
a. Riskless bond b. Buy stock and sell call c. stock
d. call with high striking price e. call with low striking price
2. Which of the following IBM call options should have the highest premium?
a. call IBM May 90 b. call IBM May 95 c. call IBM Jun 90
d. call IBM Jul 85 e. call IBM Jun 85
3. What would the SML (security market line) look like if investors were indifferent to risk?
a. a vertical line b. a line with positive slope
c. a horizontal line d. a line with negative slope
e. need more information
4. Which of the following securities is not a money market instruments?
a. T-bills b. commercial paper c. bankers' acceptance
d. negotiable CD e. promissory note
5. Assuming that the face value of a 90-day commercial paper is equal to \$1,000, and its market price is \$980, what should be the discount rate?
a. 2% b. 4% c. 6% d. 8% e. none of the above
6. Assuming face value=\$1,000, coupon rate=12%, semi-annual coupon payment, time to maturity=120 days, and the bond's quotation =100. If you buy this bond, you should pay
a. \$100 b. \$1,000 c. \$1,230 d. \$1,020 e. none of the above
7. Which of the following securities is a Eurobond?
a. an overseas Euro-dollar convertible bond issued by a company in Taiwan, R.O.C.
b. an overseas Swiss-Franc convertible bond issued by a company in Taiwan, R.O.C.
c. an overseas Japan-Yen convertible bond issued by a company in Taiwan, R.O.C.
d. an overseas Taiwan-Dollar convertible bond issued by a company in Taiwan

- e. a and b only
8. According to pure expectation theorem, an inverted yield curve implies that the inflation rate is expected to
a. increase b. decline c. unchange
d. increase then decline e. need more information
9. When two investments with substantially different expected returns are being compared, which of the following measure of risk is more appropriate?
a. covariance b. correlation c. median d. mean
e. coefficient of variation
10. The slope of the SML (security market lint) reflects the degree of risk aversion in the economy, the greater the average investor's aversion to risk,
a. the steeper the slope of the SML
b. the greater the market risk premium
c. the greater the risk premium for any stock
d. the higher the required rate of return on stocks.
e. all of the above statements are true.
11. Suppose a consol promised to pay \$100 per year in perpetuity, what would the bond be worth if the discount rate was 5%?
a. \$1,000 b. \$1,500 c. \$2,000 d. \$5,000
e. none of the above
12. Assuming other things being equal, which of the following bond should have the lowest price?
a. a convertible bond b. a straight bond c. a put bond
d. a callable bond e. need more information
13. Which of the following statements is not true?
a. bond prices move inversely with interest rate
b. the longer the maturity of a bond, the higher is its duration
c. the higher the coupon rate on a bond, the higher is its duration
d. for a given bond, the capital gain caused by a yield decrease exceeds the capital loss caused by a yield increase of the same magnitude
e. none of the above
14. A bank offers to lend a company money for one year at 12% simple rate, but the company must maintain a 20% compensating balance. The effective annual rate will be
a. 12% b. 32% c. 15% d. 16% e. none of the above
15. Project A has a cost of \$1,000 at $t=0$, and it is expected to produce a cash flow stream of \$500, \$400, \$300 and \$100 for the next four years. The cost of capital for the project is 10%,

- a. 10.1% b. 11.1% c. 12.1% d. 13.1% e. none of the above
16. For company X, the average age of account receivable is 30 days, the average age of account payable is 40 days, and the average age of inventory is 60 days. What is the length of the firm's cash conversion cycle?
a. 30 days b. 40 days c. 50 days d. 60 days
e. none of the above
17. The use of financial leverage by a firm does not have a potential impact on which of the followings
a. the Beta of the stock b. the expected return of the stock
c. the variability of net income
d. the degree of operating leverage
e. the degree of financial leverage
18. The clearing house at a futures exchange is best described by which of the followings?
a. It is the seller to every buyer
b. It is the buyer to every seller
c. It delivers on defaulted contracts
d. all of the above e. none of the above
19. The futures exchanges' powers include which of the followings?
a. fix settlement price b. set minimum initial margin
c. force liquidation only trading
d. set position limits on speculators e. all of the above
20. Which of the following NT (New Taiwan Dollar) derivative securities is not traded in Taiwan?
a. NT interest rate SWAP b. NT forward rate agreement
c. NT interest rate option
d. NT to US dollar foreign currency option
e. none of the above

Short-Essays:

- II. (15%) "Early exercising of a call option on a stock that pays no dividend prior to expiration is never optimal." Do you agree with the statement? Please explain your answers.
- III. (10%) "MM's proposition 2: The expected rate of return on the common stock of a leveraged firm increases in proportion to the debt-equity ratio." According to the above statement, should a rational investor be indifferent to the increased expected rate of return as the debt-equity ratio increases? Please explain your answers.
- IV. (15%) Define the underlying assumptions of the APT and discuss its major conclusions.