

注意：考試開始鈴響前，不得翻閱試題，
並不得書寫、畫記、作答。

國立清華大學 109 學年度碩士班考試入學試題

系所班組別：計量財務金融學系
甲組(財務金融組)

科目代碼：4903

考試科目：財務管理

—作答注意事項—

1. 請核對答案卷(卡)上之准考證號、科目名稱是否正確。
2. 作答中如有發現試題印刷不清，得舉手請監試人員處理，但不得要求解釋題意。
3. 考生限在答案卷上標記「由此開始作答」區內作答，且不可書寫姓名、准考證號或與作答無關之其他文字或符號。
4. 答案卷用盡不得要求加頁。
5. 答案卷可用任何書寫工具作答，惟為方便閱卷辨識，請儘量使用藍色或黑色書寫；答案卡限用 2B 鉛筆畫記；如畫記不清(含未依範例畫記)致光學閱讀機無法辨識答案者，其後果一律由考生自行負責。
6. 其他應考規則、違規處理及扣分方式，請自行詳閱准考證明上「國立清華大學試場規則及違規處理辦法」，無法因本試題封面作答注意事項中未列明而稱未知悉。

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*請在【答案卷、卡】作答

第一大題：單選題 (50%)，共 10 題，每題 5 分

1. Custom Cars purchased some \$39,000 of fixed assets two years ago that are classified as 5-year MACRS property. The MACRS rates are 20 percent, 32 percent, 19.2 percent, 11.52 percent, 11.52 percent, and 5.76 percent for Years 1 to 6, respectively. The tax rate is 34 percent. If the assets are sold today for \$19,000, what will be the aftertax cash flow from the sale?
 - A. \$16,358.88
 - B. \$17,909.09
 - C. \$18,720.00
 - D. \$18,904.80
 - E. \$19,000.00
2. An investment has an initial cash outflow of \$210,000 for fixed assets that will be depreciated straight-line to zero over 4 years, which is the life of the project. The sales price is set at \$19.95 a unit, the annual fixed costs of \$237,000, and the variable cost per unit is \$8.87. The tax rate is 34 percent and the discount rate is 11 percent. At what sales quantity per year will the investment break even on an accounting basis?
 - A. 32,088 units
 - B. 29,889 units
 - C. 24,092 units
 - D. 30,135 units
 - E. 26,128 units
3. Suppose that Rearden Metal currently has no debt and has an equity cost of capital of 12%. Rearden is considering borrowing funds at a cost of 6% and using these funds to repurchase existing shares of stock. Assume perfect capital markets. If Taggart borrows until they achieved a debt-to-equity ratio of 50%, then Rearden's levered cost of equity would be closest to:
 - A. 10.0%
 - B. 12.0%
 - C. 15.0%

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- D. 16.0%
- E. 17.0%
4. The Ritz Company has a 40-year-old employee that will retire at age 60 and live to age 75. The firm has promised a retirement income of \$20,000 at the end of each year following retirement until death. The firm's pension fund is expected to earn 7 percent annually on its assets and the firm uses 7% to discount pension benefits. What is Ritz's annual pension contribution to the nearest dollar for this employee? (Assume certainty and end-of-year cash flows.)
- A. \$2,756
- B. \$3,642
- C. \$4,443
- D. \$4,967
- E. \$5,491
5. An investor discovers that for a certain group of stocks, large positive price changes are always followed by large negative price changes. This finding is a violation of the ___ form of the efficient market hypothesis.
- A. moderate
- B. semistrong
- C. strong
- D. weak
- E. historical
6. Consider a one-year, at-the-money call option on Taggart stock. The effect on the price of this call option of an increase in the risk-free rate from 4% to 6% is closest to:
- A. \$0.50 decrease
- B. \$0.50 increase
- C. \$0.70 decrease
- D. \$0.80 increase
- E. \$0.80 decrease

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The current price of KD Industries stock is \$20. In the next year the stock price will either go up by 20% or go down by 20%. KD pays no dividends. The one year risk-free rate is 5% and will remain constant. Answer the question 7-10.

7. The risk neutral probability of an up state for KD Industries is closest to:
 - A. 37.5%
 - B. 60.0%
 - C. 40.0%
 - D. 62.5%
 - E. 70.2%
8. The risk neutral probability of a down state for KD Industries is closest to:
 - A. 37.5%
 - B. 62.5%
 - C. 40.0%
 - D. 60.0%
 - E. 70.0%
9. Using risk neutral probabilities, the calculated price of a one-year call option on KD stock with a strike price of \$20 is closest to:
 - A. \$1.45
 - B. \$2.40
 - C. \$2.00
 - D. \$2.15
 - E. \$3.00
10. Using risk neutral probabilities, the calculated price of a one-year put option on KD stock with a strike price of \$20 is closest to:
 - A. \$2.00
 - B. \$2.15
 - C. \$1.45

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D. \$2.40

E. \$2.50

第二大題：問答題 (50%)，共 5 題，每題 10 分

1. Discuss MM Propositions I and II in a world with taxes. List the basic assumptions, results, and intuition of the model.
2. Assume you are comparing two stocks that are identical in every way except that one stock pays dividends and the other does not. How would you expect this difference to affect the annual performance of the dividend-paying stock as compared to the non-dividend-paying stock?
3. Identify several of the differences between a forward contract and a futures contract.
4. How do options apply to capital budgeting? Explain and provide an example.
5. What should be the primary goal of the financial manager of a corporation? Why?