

Name \_\_\_\_\_ Section \_\_\_\_\_ ID # \_\_\_\_\_

**AP/ADMS 3530 3.00 Finance****Midterm Exam - Fall 2014****Friday, October 17, 2014****Type X Exam****Instructors and Sections**

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This exam consists of **40 multiple choice questions** and carries a total of **40 points**. Choose the response that best answers each question. **Circle your answers below, and fill in your answers on the bubble sheet. Only the bubble sheet is used to determine your exam score.** Please do **not** forget to write your name and ID # both at the top of this cover page and on the bubble sheet. Also please write the type of your exam (**X** or **Y**) on the bubble sheet.

**Please note the following points:**

- 1) **Read the questions carefully and use your time efficiently.**
- 2) Choose the answers that are **closest** to yours, because of possible rounding.
- 3) Keep at least **4** decimal places in your calculations and at least **2** in your final answers and at least **6** for the interest rates.
- 4) *Unless otherwise stated*, interest rates are **annual**, and bonds pay **semiannual coupons** and have a face value (or par value) of **\$1,000**.
- 5) You may use the back of the exam paper as your scrap paper.
- 6) Instructors and invigilators will not answer questions during the exam.

1. How much can be accumulated for retirement if \$8,000 is deposited annually, beginning today, and the account earns 6% interest compounded annually for 40 years?

- A) \$953,546
- B) \$1,100,345
- C) \$1,238,096
- D) \$1,312,381
- E) \$1,470,358

2. If I promise to pay you \$3,000 twelve years from now in return for a loan of \$1,000 today, what is the effective annual interest rate for this agreement?

- A) 6.26%
- B) 6.98%
- C) 9.59%
- D) 10.00%
- E) 11.52%

3. Which account would be preferred by a borrower: 7% APR with monthly compounding, or 7.15% APR with semiannual compounding?

- A) 7% with monthly compounding.
- B) 7.15% with semiannual compounding.
- C) The borrower would be indifferent.
- D) The time period must be known in order to select the preferred account.
- E) None of the above.

5. You've won a lottery and have a choice between the following options: a cash prize today of \$1,000,000 or \$30,000 a month over the next 3 years with payments beginning today. Based on the above what is the EAR of the monthly alternative, assuming that both options have the same economic value?

- A) 5.2%
- B) 5.5%
- C) 6.1%
- D) 6.3%
- E) 8.0%

6. You purchase a home in Toronto for \$650,000 and are able to come up with a down payment of 50% of the purchase price, with the rest being financed through a mortgage. You were able to negotiate a rate of 4% compounded semi-annually and you've financed this mortgage over 25 years, making monthly payments starting at the end of the first month. Based on the above information how much nominal interest are you paying over the life of the mortgage (25 years)?

- A) \$127,655
- B) \$187,871
- C) \$198,250
- D) \$287,996
- E) \$326,784

7. Bustin Jieber invests \$500 in an account that pays 6 percent simple interest per year. How much more money could he have earned over a thirty year period if the interest had been compounded annually?

- A) \$1,471.75
- B) \$1,532.50
- C) \$1,621.25
- D) \$1,804.25
- E) \$2,371.75

8. Fob Rord has a 20-year, \$150,000 mortgage with monthly payments (made at the end of each month) the rate is 6.8% per year (APR compounded semi-annually). What will be the mortgage principal (balance) remaining after 10 years?

- A) \$99,182
- B) \$99,497
- C) \$118,765
- D) \$119,043
- E) \$146,940

9. Nim Tardashian is selling locks of her hair on Zijiji. Option 1 is to pay \$1,000 cash today plus four annual payments of \$2,000 each with payments starting at the end of the second year. Option 2 is to pay \$7,000 in cash today. If the prevailing market rate is 8% per annum which option would you pick if you really, really, really, wanted a lock of Nim's hair?

- A) Option 1 as its present value is \$6,624
- B) Option 1 as its present value is \$7,134
- C) Option 2 as option 1's present value is \$6,134
- D) Option 2 as option 1's present value is \$6,624
- E) Option 2 as option 1's present value is \$7,134

10. You want to invest \$20,000 in a restaurant chain named "Coffee Or Cup". A friend has agreed to lend you the funds at a 5% interest rate compounded annually. If you agree to repay the loan by making four equal annual payments beginning 3 years from today, what will be the annual payment?

- A) \$ 5,000
- B) \$ 5,640.24
- C) \$ 6,218.36
- D) \$ 6,529.27
- E) \$ 7,143.57