ANSWERS AT END

ECONOMICS 353 **L. Tesfatsion/Spring Semester 2011**
EXERCISE 5: Eight Questions (8 Pts Total) **DUE: Tues., February 22, 12:40pm**

****PLEASE NOTE: EXERCISES ARE DUE AT THE BEGINNING OF CLASS ON THE DUE DATE. LATE EXERCISES WILL NOT BE ACCEPTED AFTER DISCUSSION OF ANSWERS HAS BEGUN – NO EXCEPTIONS****

EXERCISE INSTRUCTIONS:

- (1) Please **fill in your name and student ID number** on Side 1 of your red bubble sheet and write **353 Exercise 5** in the top margin of Side 1. (Red bubble sheets will be handed out in class each Tuesday and can also be obtained from the Econ Undergraduate Office in 174 Heady during normal business hours M-F.)
- (2) Use a number 2 pencil to **mark your answers** on Side 1 of the bubble sheet to the multiple-choice questions Q1 through Q8 below.
- (3) Each question is worth 1 point. Questions Q1-Q5 can be answered using required course materials for Mishkin Chapter 4:Part A (pp. 68-80). Questions Q5-Q8 on "End of the 30-Year Mortgage?" can be answered using the accompanying links to online readings.

Q1. Which of the statements A through C below are FALSE for fixed payment loans?

A. Installment loans and mortgages are frequently of the fixed payment type.

B. The borrower repays the loan by making the same fixed payment in every payment period

C. The borrower is always required to make all principal plus interest payments in one fixed payment occurring at the maturity date.

D. Both A and B are false.

E. Both A and C are false.

Q2. Which of the statements A through C below are TRUE for coupon bonds?

A. The issuer is required to make a fixed coupon payment in every payment period during the life of the bond, plus a face value payment at maturity.

B. The issuer is required to make a fixed coupon payment in every payment period during the life of the bond, where the present value of these cumulated payments is required to equal the face value of the bond.

C. Corporate bonds often take the form of coupon bonds.

D. Only A and C are true.

E. Only B and C are true.

Q3. Letting "×" denote multiplication, if the annual interest rate is 4 percent, then the PRESENT VALUE of a 3-year payment stream ($\$0, \$50, \$80$) with \$0 to be received at the end of the FIRST year, \$50 at the end of the SECOND year, and \$80 at end of the THIRD year is given by

A. $\$50/(1+.04)^2 + \$80/(1+.04)^3$

B. $\$50 \times (1+.04)^2 + \$80 \times (1+.04)^3$

C. $\$50/(1+.04) + \$80/(1+.04)^2$

D. $[\$50 + \$80]/3$

E. None of the above

Q4. The (annual) yield to maturity i on a coupon bond with a purchase price \$190, a face value \$210, a 2-year coupon payment stream ($\$30, \$30$), and a 2-year maturity is calculated as follows:

A. i equals the annual rate of interest that, when used to calculate the present value (PV) of the 2-year payment stream ($\$30, \$30$), results in a PV equal to the face value \$210.

B. i equals the coupon payment \$30 divided by the face value \$210

C. i equals the coupon payment \$30 divided by the purchase price \$190.

D. i equals the annual interest rate that, when used to calculate the present value (PV) of the 2-year payment stream ($\$30, \$240$), results in a PV equal to the purchase price \$190.

E. None of the above

Q5. Which of the following securities has the LOWEST yield to maturity: NOTE: In all the statements below, an "n percent coupon bond" refers to a coupon bond with an n percent coupon rate. HINT: No calculations are necessary to answer Q5.

A. A 7 percent coupon bond with a \$2000 face value and a purchase price of \$1600

B. A 6 percent coupon bond with a \$1200 face value and a purchase price of \$1000

C. A 5 percent coupon bond with a \$900 face value and a purchase price of \$1000

D. A 5 percent coupon bond with a \$1300 face value and a purchase price of \$1200

SEE THE FOLLOWING PAGE FOR Q6-Q8.

Q6-Q8: Questions on "End of the 30-Year Mortgage?". Please use the following required and recommended online readings to answer Q6-Q8 below.

** [1] J. M. Guttentag, "What Do Fannie Mae and Freddie Mac Do?", March 10, 2003.
www.econ.iastate.edu/classes/econ353/tesfatsion/WhatDoFannieMaeFreddieMacDo.Guttentag2003.pdf
** [2] "Factbox: Issues at Play in Debate on Future of Fannie, Freddie," Reuters, Feb 9, 2011.
www.econ.iastate.edu/classes/econ353/tesfatsion/FannieFreddieFactBox.Reuters11Feb2011.pdf
** [3] M. Jacobson, "Obama Administration Unveils Fannie, Freddie Proposals to Much Debate," National Public Radio Report, February 11, 2011.
www.econ.iastate.edu/classes/econ353/tesfatsion/ObamaFannieFreddieProposals.NPR11Feb2011.pdf
* [4] "Reforming America's Housing Finance Market: A Report to Congress," White Paper, Department of the Treasury and U.S. Department of Housing and Urban Develpment (HUD), February 2011.
www.econ.iastate.edu/classes/econ353/tesfatsion/ReformingUSHousing.Obama11Feb2011.pdf

Q6 (1 Point). According to Ref.[1], in 2003 (the publication date of [1]) the main function of the two "government-sponsored enterprises (GSEs)" Fannie Mae and Freddie Mac was to ___

A. provide newly issued home mortgages to subprime borrowers who did not meet standard income and asset eligibility requirements.

B. purchase mortgage-backed securities and pool them into collateralized debt obligations to be sold to investors.

C. provide a secondary market in home mortgages by purchasing home mortgages from the lenders who originated them and then reselling many of these mortgages in securitized form (i.e., as mortgage-backed securities) which the GSEs guaranteed (underwrote).

D. insure newly issued home mortgage loans against default.

Q7 (1 Point). According to Refs.[1-2], in the past the GSEs Fannie Mae and Freddie Mac have been able to package and sell mortgage-backed securities at a higher price than their private-firm competitors because ___

A. the GSEs' securities are fully guaranteed by the U.S. government against default, as part of their contractual provisions.

B. the GSEs' credit lines with the U.S. Treasury have been interpreted by investors as evidence that the U.S. government would bail out these GSEs if they ever got into financial trouble, thus lowering the perceived default risk of their securities.

C. the GSEs have fewer adverse selection problems than private firms.

D. the GSEs have better access than private firms to investment banking expertise to help them place these securities with investors.

Q8 (1 Point). According to Refs.[2-3], the continued issuance of 30-year fixed-rate home mortgages is now in some doubt because _____

A. the Obama Administration favors the immediate closing down of Fannie Mae and Freddie Mac, which will greatly disrupt the secondary market for home mortgages.

B. the Obama Administration favors the reorganization of Fannie Mae and Freddie Mac into government agencies with strong and explicit U.S. government guarantees of their securities against default.

C. the Obama Administration favors the merger of Fannie Mae and Freddie Mac with the Federal Housing Administration into a new agency that is expressly prohibited from issuing home mortgages with over 15 years maturity.

D. the Obama Administration is considering the eventual closing down of Fannie Mae and Freddie Mac, and it is unclear whether purely private financial firms with no government assistance (e.g., no credit lines from the U.S. Treasury) would be willing to assume the risks associated with the purchase of 30-year fixed-rate home mortgages.

Multiple Choice Answers: Q1-C, Q2-D, Q3-A, Q4-D, Q5-C, Q6-C, Q7-B, Q8-D