Section I  Fill in the blanks

1. ________________ supply loanable funds to firms and the government.

2. Equilibrium in the loanable funds market gives us the equilibrium quantity of
   ________________ and the equilibrium ________________ interest rate.

3. ________________ Investors spreading their money over different assets to reduce the risk while maintaining a high-expected return on their investment.

4. The money rates of interest paid for different loans issued on the same date could differ because of differences in ________________ and/or ________________.

5. As the bond price rises, the yield on the bond ________________.

6. The Fisher equation tells us that for a given real interest rate as inflation goes up, nominal interest rate goes ________________.

7. ________________ A market in which the security prices always fully reflect the available information.

8. ________________ A decline in private expenditures on investment as a result of an increase in government purchases.

9. ________________ The system of financial markets and financial intermediaries through which firms acquire funds from households.

10. ________________ The British economist who popularized the Paradox of Thrift
Section II

1. Emily, in late 2018, intends to save $200 for two years. She investigates lending to the U.S. government versus lending to different U.S. corporations. She thinks inflation will average 1% over the next several years. A page on Bloomberg provides yield information on various U.S. treasury notes. She focuses on treasury securities of duration 1-year and 2-year, about to be issued. These two securities appear on her Bloomberg screen:

- U.S. t-note, issue date 1/01/19, repayment date 1/01/20, price $200, yield 1.5%
- U.S. t-note, issue date 1/01/19, repayment date 1/01/21, price $200, yield 2.5%

A) What is Angela’s ex-ante real annual yield expectation for the 2-year note?

B) Suppose inflation averages 2% over the next two years. What was the ex-post real yield on the 2-year note?

C) What do market participants, on average, expect the 1-year yield will be, in 2020? (ignore term premia considerations)

D) If inflation turned out to be 4% in 2019, would you expect that the government would have to offer a higher or lower interest rate to borrow money for 1-year, in 2020? Explain briefly.

E) Assume Emily bought the 2-year note at a price of $200 and inflation was 4% in 2019. If Emily tries to sell her note in 2020, would the payment she collected likely be higher or lower than $200? Briefly explain:
F) Emily now looks at a Bloomberg screen that provides information about the characteristics of a number of corporate bonds:

IBM note, issue date 1/01/19, repayment date 1/01/21, price $200 yield 3.5%
SnorX note, issue date 1/01/19, repayment date 1/01/21, price $200 yield 5.5%

i) Explain why SnorX must pay a higher rate than IBM, to borrow for 2 years, and why both SnorX and IBM pay more than the government to borrow money over the same period.

ii) Suppose war breaks out between the U.S. and N. Korea, and global economies collapse.

   a) The price of the 2-year t-note likely (circle one answer)
      Goes up       Goes down

   b) The price of the 2-year IBM note likely (circle one answer)
      Goes up       Goes down       Goes down a lot

   c) The price of the 2-year SnorX note likely (circle one answer)
      Goes up       Goes down       Goes down a lot
Section III The charts below depict lending and borrowing for the U.S. economy in late 2017:

1. The two quadrants above depict the U.S. loanable funds markets in late 2017. Label the curves and identify, on the graph, the equilibrium real corporate borrowing rate and the equilibrium quantity of lending to U.S. corporations. Likewise, identify the equilibrium quantity of borrowing by the U.S. government, and the equilibrium interest rate that households receive. What is the spread between the two equilibrium borrowing rates?

President Trump, in late 2017, enacts a very large tax cut. The U.S. government, in 2018, needs to borrow 100% more than they did in 2017. In 2017 inflation expectations are 2%. In 2018, inflation rises and inflation expectations rise to 2.5%.
a) In the government quadrant, adjust the picture to represent the change in government policy. Identify the new equilibrium interest rate, and the new equilibrium level of lending to the government.

b) We now have a new equilibrium $r_g$. How will that affect the loanable funds market for corporations?

c) Given $r_g$, draw in the change you expect to see, in the corporate loanable funds market.

d) If nothing else changes, will corporations be investing and borrowing more or less? What do economists label this change in private investment, in reaction to a change in government borrowing?

e) Suppose Trump’s tax cut bolsters corporations’ confidence. Suppose businesses ramp up investment, so that their investment and borrowing are higher in 2018, than they were in 2017. Draw the necessary additional curve shift, so that your chart depicts both effects.

f) Suppose you looked on a Bloomberg screen in 2017, and again in 2018. What would the interest rate be that the government paid, to borrow money from households in 2017? What would the interest rate be in 2018?