MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Currently, a three-year Treasury note pays 4.75%. Assuming that your tax rate is 20%, what is the minimum interest rate that you would need to earn on a tax-free municipal bond in order to buy it instead?
   A) 9.8%  
   B) 0.95%  
   C) 15.25%  
   D) 5.7%

2) A futures contract is
   A) an agreement that specifies the delivery of a commodity or financial instrument, with the price and date of delivery to be negotiated subsequently.
   B) an agreement that specifies the delivery of a commodity or financial instrument at a currently agreed-upon price, with date of delivery to be negotiated subsequently.
   C) an agreement that specifies the delivery of a commodity or financial instrument at an agreed-upon future date, with the price to be negotiated at the time of delivery.
   D) an agreement that specifies the delivery of a commodity or financial instrument at an agreed-upon future date at a currently agreed-upon price.

3) Swaps differ from futures and options in all of the following ways EXCEPT:
   A) Less regulation  
   B) More privacy  
   C) Intended to reduce the risk faced by participants  
   D) More flexibility

4) The risk structure of interest rates refers to
   A) the relationship among the interest rates on bonds with the same maturity.  
   B) the relationship among the interest rates on similar bonds with different maturities.  
   C) the amount of additional interest necessary to compensate savers for the lesser liquidity of some bonds.  
   D) the rules governing how lenders are to be repaid in the event of default.

5) The increase in German investment in what was formerly East Germany resulted in
   A) a shift to the left in the German demand for loanable funds curve.  
   B) a decline in the world real interest rate.  
   C) an increase in the real interest rate in the United States.  
   D) a shift to the right in the German supply of loanable funds curve.

6) Which of the following statements about junk (high-risk) bonds is true?
   A) They never outperform treasury bonds since they’re too risky.  
   B) They tend to perform best during recessions.  
   C) The price of junk bonds increase as their perceived risk increases.  
   D) One can profit by owning them if market perceptions of their risk decline.
7) During the 1974–1975 recession, the rate on commercial paper increased relative to the rate on T-Bills. This was an indication of the fact that
A) the inflation rate had increased significantly.
B) interest on commercial paper had lost its exemption from the federal income tax.
C) investors had become concerned about default risk in the short-term market.
D) investors had become nervous about the ability of the federal government to meet its financial obligations.

8) Holding all other factors that affect yields constant, following passage of the Tax Reform Act of 1986—which lowered marginal income tax rates—yields on
A) municipal bonds should have fallen relative to yields on U.S. Treasury securities.
B) municipal bonds should have risen relative to yields on corporate bonds.
C) U.S. Treasury securities should have fallen relative to yields on corporate bonds.
D) corporate bonds should have risen relative to the yields on U.S. Treasury securities.

9) Which of the following statements about the presence of speculators in futures markets is correct?
A) They make it difficult for hedgers to find someone to take the opposite side of their positions.
B) They aid hedgers by increasing the liquidity in futures markets.
C) Once a futures market participant is known to be a speculator he or she is no longer allowed to participate in the market.
D) Their main objective is to reduce their exposure to risk.

10) If Americans develop a taste for Canadian maple syrup, the likely result is
A) the price of Canadian maple syrup will fall when measured in Canadian dollars.
B) the value of the Canadian dollar will rise relative to the value of the U.S. dollar.
C) neither the price of Canadian maple syrup nor the value of the Canadian dollar will be affected.
D) the value of the Canadian dollar will fall relative to the value of the U.S. dollar.

11) A change in the dollar value of the British pound from $1.60 to $1.50 represents
A) an appreciation of the dollar relative to the pound.
B) an increase in the dollar price of British goods.
C) an increase in the pound price of British goods.
D) an increase in the pound price of British goods.

12) If you are indifferent between investing $1000 for one year in a U.S. Treasury security that has an interest rate of 5% or in a Canadian government security that has an interest rate of 8%, you must be expecting
A) the inflation rate in the United States will be higher than the inflation rate in Canada during the year.
B) productivity growth in Canada to be greater than productivity growth in the United States during the year.
C) the U.S. dollar to appreciate against the Canadian dollar by 3% during the year.
D) the U.S. dollar to depreciate against the Canadian dollar by 3% during the year.

13) The default risk premium is measured
A) as the difference between the yield on the security and the yield on a U.S. Treasury security of the same maturity.
B) by an index published monthly by The Wall Street Journal.
C) by an index published monthly by the Securities and Exchange Commission.
D) as the difference between the nominal yield on the security and the real after-tax yield on the security.
14) According to the expectations theory, if investors believed that, for a holding period the average of the expected future short-term yields was greater than the long-term yield, they would act so as to
   A) drive down the prices of the short-term and long-term securities.
   B) drive down the price of the short-term security and drive up the price of the long-term security.
   C) drive up the prices of the short-term and long-term securities.
   D) drive up the price of the short-term security and drive down the price of the long-term security.

15) Suppose that a slice of pepperoni pizza costs £1 in London and $2 in San Francisco. If the real exchange rate is one-third of a slice of U.S. pizza for one slice of British pizza, how many pounds should you receive in exchange for $1?
   A) 2
   B) 1/3
   C) 1.5
   D) 3
16) Suppose that Canada has been experiencing high rates of inflation. If the Canadian government institutes a plausible new policy to lower inflation, what will be the effect on the value of the Canadian dollar?

PPP would say it should appreciate against other currencies over time, or depreciate at a slower rate.
17) Explain how each of the following might make use of the futures market.
(a) A lender who is worried that its cost of funds might rise during the term of a loan it has made
(b) A speculator who believes strongly that interest rates will rise

(a) Lender could sell T-Bill futures that will pay off when rates rise.

(b) Could do the same.

In each case the seller of T-Bill futures will profit if the price of the T-Bill falls; that is, they will profit when rates rise. In case (a), this will hedge the lender's outstanding commitment. For the speculator in (b), it's pure profit.
18) Suppose that the futures index for the S&P 500 for delivery one year from now is selling for $960,000, whereas the stocks are selling for $900,000. If the one-year Treasury bill rate is 5%, is it possible to use index arbitrage to make a profit?

If you can borrow $900,000 for one year at 5%, then you can do it. Buy the stocks and sell a futures contract to sell them in one year. Next year, you (effectively) sell those stocks for $960,000 and repay principal and interest of

$900,000 \times 1.05 = 945,000$

for a $15,000 profit.

But if you're not the US govt, you can't borrow at this rate. So it depends on your cost of funds, not that of the US govt!
19) Suppose that the one-year Treasury bill rate in the United States is 6%, the one-year government bond rate in Canada is 4%, and investors expect the U.S. dollar to depreciate against the Canadian dollar by 4% over the coming year. Is the nominal interest rate parity condition violated?

\[
0.06 < 0.04 - (-0.04) = 0.08.
\]

(That is)

\[
i < i_S - \frac{\Delta EX_e}{EX}.
\]