

**Multiple choice:** Choose the best response to each prompt.

1. Suppose Corporate Bond A has a lower interest rate than Corporate Bond B, and the bonds have the same maturity date, what could explain this difference?
  - (a) Corporate Bond B has a higher interest rate risk.
  - (b) Corporate Bond A has a higher default risk.
  - (c) Corporate Bond B has a higher default risk.
  - (d) Corporate Bond A has a higher interest rate risk.
  
2. The returns on what type of bonds are typically subject to federal taxes, but not state, or local taxes?
  - (a) Corporate bonds
  - (b) Municipal bonds
  - (c) Bonds issued by local governments
  - (d) Federal government bonds
  
3. What is the term for the behavior of interest rates for bonds that have different maturity dates, but are otherwise similar?
  - (a) Interest structure of bonds
  - (b) Maturity structure of bonds
  - (c) Term structure of interest rates
  - (d) Risk structure of interest rates
  
4. If interest rates are expected to decrease over time, what does the expectations theory predict about the shape of the yield curve?
  - (a) The yield curve will be upward sloping.
  - (b) The yield curve will be flat.
  - (c) The yield curve will be downward sloping.
  - (d) The yield curve will be U-shaped.

5. What is the liquidity premium theory?
- (a) Theory suggests that bonds with longer maturities should pay a higher premium.
  - (b) Theory that bonds pay an interest rate equal to the expected average interest rate over the life of the bond.
  - (c) Theory that more liquid bonds pay a higher interest rate.
  - (d) Theory that less liquid bonds pay a higher interest rate.
6. Suppose the Fed conducts a quantitative easing measure in which it makes open market purchases of primarily long-term federal government bonds. What is the impact on the yield curve?
- (a) The yield curve will be U-shaped
  - (b) The yield curve will get shorter.
  - (c) The yield curve will become upward sloping or become steeper.
  - (d) The yield curve will get flatter or become downward sloping.
7. If a bond rating agency lowered its rating on a bond, what is the likely impact on the bond market?
- (a) There will be a decrease in demand for the bond and a decrease in the interest rate for the bond.
  - (b) There will be a decrease in demand for the bond and an increase in the interest rate for the bond.
  - (c) There will be an increase in demand for the bond and a decrease in the interest rate for the bond.
  - (d) There will be an increase in demand for the bond and an increase in the interest rate for the bond.
8. Suppose the tax rate is increased for the return earned on federal government bonds, but not changed for corporate bonds. What would be the impact on the bond market?
- (a) The demand for federal government bonds would decrease, leading to an increase in the price of government bonds, and therefore a decrease in the interest rate on government bonds.
  - (b) The demand for federal government bonds would increase, leading to an increase in the price of government bonds, and therefore a decrease in the interest rate.
  - (c) The demand for federal government bonds would increase, leading to a decrease in the price of government bonds, and therefore an increase in the interest rate.
  - (d) The demand for federal government bonds would decrease, leading to a decrease in the price of government bonds, and therefore an increase in the interest rate on government bonds.
9. What are the explicit costs necessary to simply engage in a financial transaction?
- (a) Information costs
  - (b) Transaction costs
  - (c) Interest payments
  - (d) Scale costs

10. What are the costs financial investors may need to incur to determine the credit worthiness of borrowers or profitability of potential financial investments?
- (a) Information costs
  - (b) Interest costs
  - (c) Default costs
  - (d) Adverse selection costs
11. Which of the following is an example of asymmetric information?
- (a) When different financial investors take on different information costs.
  - (b) When a lender is unsure of a borrowers ability to pay back a loan, but the borrower knows with a high degree of certainty of their ability to repay the loan.
  - (c) All of these are examples of asymmetric information.
  - (d) When different financial investors have different evaluations for the profitability of a financial investment.
12. What is the situation when lenders cannot easilty distinguish high-risk borrowers from low-risk borrowers?
- (a) Costly information
  - (b) Default risk
  - (c) Moral hazard
  - (d) Adverse selection
13. Which of the following is true regarding adverse selection?
- (a) Information costs would be lower than without adverse selection
  - (b) Interest rates will be lower than without adverse selection
  - (c) Bank capital would be higher than without adverse selection
  - (d) Interest rates will be higher than a situation without adverse selection
14. What is a strategy to reduce the adverse selection problem in financial markets?
- (a) Raising interest rates
  - (b) Reducing lending to firms with low net worth
  - (c) All of these are actions to reduce the problem of adverse selection
  - (d) Monitoring borrowers use of funds

15. What is the situation when borrowers have an incentive to engage in risky uses for borrowed funds and are able to hide this behavior from lenders?
- (a) All of the these describe this situation.
  - (b) High information costs
  - (c) Adverse selection
  - (d) Moral hazard
16. Which of the following is a strategy to reduce moral hazard problems?
- (a) Reducing lending to firms with high net worth
  - (b) All the above are strategies ro reduce moral hazard.
  - (c) Raising the interest rate
  - (d) Lender making payments directly to contractors for a borrower.
17. What is the situation when managers of a firm have different incentives than the shareholders of a firm?
- (a) Principal agent problem
  - (b) Manager stakeholder problem
  - (c) Adverse selection problem
  - (d) Financial supervision problem
18. Which of the following is a bank liability?
- (a) Savings deposits
  - (b) Discount loan from the Federal Reserve District bank
  - (c) Checking deposits
  - (d) All of these are liabilities for a bank.
19. Which of the following is true regarding bank assets and liabilities?
- (a) Bank liabilities typically have longer maturities than bank assets
  - (b) Bank liabilities are more risky than bank assets.
  - (c) Bank assets typically have longer maturities than bank liabilities
  - (d) Bank liabilities have higher interest rates than bank assets

20. If bank assets have fixed interest rates and bank liabilities have variable interest rates, what impact does an increase in interest rates have?
- (a) Increases the present value of liabilities and makes no change to the present value of assets.
  - (b) Decreases the present value of assets and makes no change to the present value of liabilities.
  - (c) Decreases the present value of liabilities and makes no change to the present value of assets.
  - (d) Increases the present value of assets and makes no change to the present value of liabilities.
21. What is true regarding the duration gap?
- (a) It is positive when bank capital is positive and negative when bank capital is negative.
  - (b) It is typically negative for banks.
  - (c) It is equal to or close to zero for financially healthy banks.
  - (d) It is typically positive for banks.
22. What might cause a bank to become insolvent?
- (a) If a bank made loans which declined in value due to defaults.
  - (b) If the value of securities owned by the bank falls.
  - (c) All of these can cause a bank to become insolvent.
  - (d) If a bank sells assets at a loss to cover liabilities.
23. What is the situation when the present value of a bank's assets are greater than its liabilities, but it lacks sufficient liquid assets to meet its liabilities?
- (a) Bank is solvent but faces a liquidity crisis.
  - (b) Bank is liquid but faces a solvency crisis.
  - (c) Bank has negative net worth.
  - (d) Bank is both illiquid and insolvent.
24. What problem does a lender of last resort help reduce?
- (a) Bank insolvency
  - (b) Bank illiquidity
  - (c) Recessions
  - (d) Negative net worth

25. What is the situation when there is failure of one or more financial firms and financial investors cannot distinguish between solvent and insolvent institutions, and so withdraw their funds from otherwise healthy banks?
- (a) Insolvency
  - (b) Financial transmission
  - (c) Credit market risk
  - (d) Contagion

**Short-answer and problem-solving questions:** Provide written answers to each question in the space provided.

26. (5 points) Suppose economic confidence increases, causing financial investors to worry less about the risk of default increases for speculative-grade bonds. Describe and illustrate the impact on the price and interest rate of bonds for both risk-free government bonds and speculative-grade bonds. What happens to the risk premium?
27. (5 points) Suppose with a high degree of certainty, people expect interest rates to decrease over the next two years. Use a market for bonds to describe and illustrate the change in interest rates paid for a 30-day government bond and a two-year government bond. Use two graphs for the two bond markets, and illustrate the difference in the price of bonds.
28. (5 points) Use a market for bonds to describe and illustrate the difference in the rate of interest paid for one-year U.S. federal government bonds and ten-year U.S. federal government bonds. Suppose the Fed conducts an open market purchase of short-term government bonds. Describe and illustrate the difference in the price of bonds and how that difference changes due to the open market operation. Use two graphs to answer this question.

29. (5 points) Suppose people expect a recession is starting and the Fed will take a response that will stimulate spending. Suppose people expect the recession to end after two years, and at that point they expect the Fed to reverse their actions taken at the onset of the recession. Draw and describe a yield curve that illustrates this situation. Identify the two-year maturity in your illustration.
30. (5 points) In 1982, interest rates were at historic highs after the Fed used monetary policy to bring inflation back down to normal levels. At this point inflation was low and the economy dipped into a recession. Draw and describe a yield curve that illustrates the situation in 1982, where interest rates are at historic highs and the Fed is expected to use monetary policy to fight the recession.
31. (5 points) Compare the situation in bond markets in which the probability of default is known by lenders versus when the probability of default is not known by lenders. How does the demand for each type of bond compare to the other? What is the impact of this asymmetric information on the interest rate on bonds? What is the impact on the quantity of borrowing? What type of asymmetric information is this?

32. (5 points) Describe moral hazard behavior in the financial and banking industry, and two ways that financial firms manage that risk.

33. (5 points) Describe how a liquidity crisis can lead to a solvency crisis. Clearly define the difference between a liquidity problem versus a solvency problem in your answer.

34. (5 points) Describe how contagion can lead to a financial crisis.

35. (5 points) Do banks typically have a positive or negative duration gap? Explain your answer by listing common bank assets and liabilities, and whether each typically has long or short durations.