

Handwritten notes on the left margin, including letters A, B, C, D and numbers 1 through 10, possibly indicating answers to questions.

34.25  
85.6%

$\frac{34}{40}$

UNIVERSITY OF CALGARY  
DEPARTMENT OF ECONOMICS  
MIDTERM EXAMINATION 1  
ECONOMICS 341 (03)

Winter 2002

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February 1, 2002  
TIME: 50 Minutes

8, 20, 20, 30, 10, 20

INSTRUCTIONS:

Answer all 40 questions. Choose the best answer and mark your choice with a pencil on the Scantron sheet provided.

Non-programmable calculators are allowed for this examination.

MULTIPLE CHOICE

1. Every financial market has the following characteristic:  
a. It determines the level of interest rates.  
✓ b. It allows common stock to be traded.  
c. It allows loans to be made.  
Ⓐ d. It channels funds from lenders-savers to borrowers-spenders.
  
2. The problem created by asymmetric information before the transaction occurs is called \_\_\_\_\_, while the problem created after the transaction occurs is called \_\_\_\_\_.  
✓ Ⓐ a. adverse selection; moral hazard  
b. moral hazard; adverse selection  
c. costly state verification; free-riding  
d. free-riding; costly state verification
  
3. Adverse selection is a problem associated with equity and debt contracts arising from  
✓ Ⓐ a. the lender's relative lack of information about the borrower's potential returns and risks of his investment activities.  
b. the lender's inability to legally require sufficient collateral to cover a 100% loss if the borrower defaults.  
c. the borrower's lack of incentive to seek a loan for highly risky investments.  
d. none of the above.

4. In financial markets, lenders typically have inferior information about potential returns and risks associated with any investment project. This difference in information is called
- a. comparative informational disadvantage.
  - b. asymmetric information.
  - c. variant information.
  - d. caveat venditor.
5. Which of the following are true statements?
- a. The conversion of a barter economy to one that uses money increases efficiency by reducing the cost of exchange.
  - b. The conversion of a barter economy to one that uses money increases efficiency by reducing the cost to those who wish to specialize.
  - c. The conversion of a barter economy to one that uses money increases efficiency by reducing transactions costs.
  - d. All of the above.
6. When compared to exchange systems that rely on money, disadvantages of the barter system include:
- a. the requirement of a double coincidence of wants.
  - b. increasing the cost of exchanging goods over time.
  - c. raising the cost of exchange to those who would specialize.
  - d. all of the above.
7. People hold money even during inflationary episodes when other assets prove to be better stores of value. This can be explained by the fact that money is
- a. extremely liquid.
  - b. a unique good for which there are no substitutes.
  - c. the only thing accepted in economic exchange.
  - d. all of the above.
8. The evolution of the payments system from barter to precious metals, then to fiat money, then to cheques can best be understood as a consequence of
- a. government regulations designed to improve the efficiency of the payments system.
  - b. competition among firms to make it easier for customers to purchase their products.
  - c. innovations that reduced the costs of exchanging goods and services.
  - d. all of the above.

9. If there are five goods in a barter economy, one needs to know ten prices in order to exchange one good for another. If, however, there are four goods in a barter economy, then one needs to know \_\_\_\_\_ prices in order to exchange one good for another.

- ✓ a. 4  
b. 5  
c. 6  
d. 8

$$\frac{4(3)}{2} = 6$$

10. Because it is a medium of exchange, money

- ✓ a. discourages specialization and the division of labour.  
b. reduces transaction costs.  
c. is not allowed to earn interest.  
d. does only (b) and (c) of the above.

11. Because it is a unit of account, money

- a. reduces transaction costs.  
b. reduces the number of prices that need to be calculated.  
c. does not earn interest.  
d. does only (a) and (b) of the above.

12. The problem of the double coincidence of wants can be avoided if

- (B) a. trade is organized in a central market.  
b. money is used to facilitate exchanges.  
c. barter trades are encouraged.  
← d. both (a) and (b) of the above.

13. Which of the following \$1,000 face-value securities has the highest yield to maturity?

- ✓ a. A 5 percent coupon bond selling for \$1,000. 5%  
b. A 10 percent coupon bond selling for \$1,000. 10%  
c. A 12 percent coupon bond selling for \$1,000. 12%  
d. A 12 percent coupon bond selling for \$1,100. <12%

14. The yield on a discount basis of a 30-day, \$1,000 Treasury bill selling for \$950 is

- ✓ a. 5 percent.  
b. 10 percent.  
c. 50 percent.  
d. none of the above.

$$\frac{F - P}{P} \times \frac{365}{t} = \frac{1000 - 950}{950} \times \frac{365}{30} = 0.64$$

15. In which of the following situations would you prefer to be making a loan?

- ✓ 2/ a. The interest rate is 9 percent and the expected inflation rate is 7 percent.  
3 b. The interest rate is 4 percent and the expected inflation rate is 1 percent.  
-2/ c. The interest rate is 13 percent and the expected inflation rate is 15 percent.  
-2/ d. The interest rate is 25 percent and the expected inflation rate is 50 percent.

16. The current yield, which equals the coupon payment divided by the price of a coupon bond, is a less accurate measure of the yield to maturity the \_\_\_\_\_ the maturity of the bond and the \_\_\_\_\_ the price is from/to the par value.
- shorter; closer
  - shorter; farther
  - longer; closer
  - longer; farther
17. The nominal interest rate minus the expected rate of inflation
- defines the real interest rate.
  - is a better measure of the incentives to borrow and lend than is the nominal interest rate.
  - is a more accurate indicator of the tightness of credit market conditions than is the nominal interest rate.
  - all of the above.
18. A credit market instrument that pays the owner the face value of the security at the maturity date and nothing prior to then is called a
- simple loan.
  - fixed-payment loan.
  - coupon bond.
  - discount bond.
19. Examples of discount bonds include
- Canadian Treasury bills.
  - Canada bonds.
  - zero-coupon bonds.
  - only (a) and (c) of the above.
20. For a consol, the current yield is an \_\_\_\_\_ of the yield to maturity.
- underestimate
  - overestimate
  - exact measure
  - approximate measure
21. If a \$10,000 coupon bond has a coupon rate of 5 percent, then the coupon payment every year is
- \$40.
  - \$140.
  - \$400.
  - none of the above.
- $$10000 \times 0.05 = 500$$
22. A \$5,000 coupon bond with a \$250 coupon payment every year has a coupon rate of
- 2 percent.
  - 4 percent.
  - 5 percent.
  - 10 percent.
- $$\frac{250}{5000} = 0.05$$

23. The current yield on a \$10,000, 10 percent coupon bond selling for \$8,000 is
- a. 10.0 percent.  
 b. 12.5 percent.  
 c. 15.0 percent.  
 d. 17.5 percent.
- $\frac{1000}{8000} = \frac{1}{8} = 12.5\%$

24. The yield on a discount basis of a 180-day \$1,000 Treasury bill selling for \$900 is
- a. 10 percent.  
 b. 22 percent.  
 c. 25 percent.  
 d. 40 percent.
- $\frac{F-P}{P} \times \frac{365}{180} = \frac{1000-900}{900} \times \frac{365}{180} = 0.225$

25. The return on a 10 percent coupon bond that initially sells for \$1,000 and sells for \$950 next year is
- a. -10 percent.  
 b. -5 percent.  
 c. 0 percent.  
 d. 5 percent.
- $\frac{100 + 950 - 1000}{1000} = -0.05 = -5\%$

- 26. Which of the following are true of simple loans?
- a. A simple loan requires the borrower to repay the principal and interest at the maturity date.  
 b. Commercial loans to businesses are often of this type.  
 c. The borrower repays the loan by making the same payment every month.  
 → d. Both (a) and (b) of the above.

27. Which of the following are true of fixed payment loans?
- a. The borrower repays both the principal and interest at the maturity date.  
 b. Installment loans and mortgages are frequently of the fixed payment type.  
 c. The borrower repays the loan by making the same payment every month.  
 d. Both (b) and (c) of the above.

28. Which of the following are true for discount bonds?
- a. A discount bond is bought at a price below its face value.  
 b. The purchaser receives the face value of the bond at the maturity date.  
 c. Canadian Treasury bills and so-called zero-coupon bonds are examples of discount bonds.  
 d. All of the above.

- 29. For a simple loan, the simple interest rate equals the
- a. real interest rate.  
 b. nominal interest rate.  
 c. current yield.  
 → d. yield to maturity.

30. Which of the following are true for a coupon bond?
- a. When the coupon bond is priced at its face value, the yield to maturity equals the coupon rate.
  - b. The price of a coupon bond and the yield to maturity are negatively related.
  - c. The yield to maturity is greater than the coupon rate when the bond price is above the par value.
  - d. Only (a) and (b) of the above are true.
31. Which of the following are true for the current yield?
- a. The current yield is defined as the yearly coupon payment divided by the price of the security.
  - b. The formula for the current yield is identical to the formula describing the yield to maturity for a discount bond.
  - c. The current yield is always a poor approximation for the yield to maturity.
  - d. All of the above are true.
32. The formula for the measure of the interest rate called the yield on a discount basis has two peculiarities:
- a. it uses the percentage gain on the purchase price of the bill.
  - b. it ignores the time to maturity.
  - c. it puts the yield on the annual basis of a 365 day year.
  - d. both (a) and (c) of the above.
33. Which of the following are true concerning the distinction between interest rates and return?
- a. The rate of return on a bond will not necessarily equal the interest rate on that bond.
  - b. The return can be expressed as the sum of the current yield and the rate of capital gains.
  - c. The rate of return will be greater than the interest rate when the price of the bond rises between time  $t$  and time  $t+1$ .
  - d. All of the above are true.
34. Which of the following are generally true of all bonds?
- a. The only bond whose return equals the initial yield to maturity is one whose time to maturity is the same as the holding period.
  - b. A rise in interest rates is associated with a fall in bond prices, resulting in capital losses on bonds whose terms to maturity are longer than the holding period.
  - c. The longer a bond's maturity, the greater is the size of the price change associated with an interest rate change.
  - d. All of the above are true.

35. Which of the following are generally true of all bonds?
- The longer a bond's maturity, the lower is the rate of return that occurs as a result of the increase in the interest rate.
  - Even though a bond has a substantial initial interest rate, its return can turn out to be negative if interest rates rise.
  - Prices and returns for long term bonds are more volatile than those for shorter term bonds.
  - All of the above are true.
36. If the expected return on CBS stock rises from 5 to 10 percent and the expected return on NBC stock rises from 12 to 18 percent, then the expected return of holding CBS stock \_\_\_\_\_ relative to NBC stock and the demand for CBS stock \_\_\_\_\_.
- |  |     |         |     |
|--|-----|---------|-----|
| a. rises; rises                                  | CBS | 5 → 10  | ↑ 5 |
| b. rises; falls                                  | NBC | 12 → 18 | ↑ 6 |
| c. falls; rises                                  |     |         |     |
| <input checked="" type="radio"/> d. falls; falls |     |         |     |
37. If <sup>stocks</sup>fluctuations in interest rates become smaller, then, other things equal, the demand for stocks \_\_\_\_\_ and the demand for long-term bonds \_\_\_\_\_.
- increases; increases
  - increases; decreases
  - decreases; decreases
  - decreases; increases
38. Holding everything else constant,
- if an asset's risk rises relative to that of alternative assets, the demand will fall.
  - the less liquid an asset, relative to alternative assets, the greater will be the demand.
  - the lower the expected return relative to alternative assets, the greater will be the demand.
  - only (a) and (b) of the above.
39. You would be less willing to purchase Canada bonds, other things equal, if
- you expect interest rates to fall.
  - gold becomes more liquid.
  - you expect bond prices to rise.
  - either (a) or (b) of the above occurs.

40. If the expected return on RST stock falls from eight to five percent and the expected return on XYZ stock rises from three to four percent, then the expected return of holding XYZ stock \_\_\_\_\_ relative to RST stock and demand for XYZ stock \_\_\_\_\_.

- a. rises; rises
- b. rises; falls
- c. falls; rises
- d. falls; falls

RST 8 → 5  
XYZ 3 → 4

\* \* \* \* \*