Midterm COMM 308.F
Answers

Question 1
What would be your required monthly payments on a five year loan for a $50,000 boat, requiring a down payment of $5,000, if payments are due at the end of each month and the interest rate is 8% compounded annually?

a.$912.44
b.$925.03
c.$906.44
d.$912.27

Answer: c

*Question 2
Jan plans to invest $2000 in an equity fund every year end beginning this year. The expected annual return on the fund is 15 percent. How much would she expect to have at the end of 20 years?

a. $176424
b. $204887
c. $178424
d. $237620

Answer: b

Question 3
In 30 years, you plan to set up a fellowship fund for your university that pays out $100,000/year in perpetuity with an annually compounded discount rate of 5%. In order to set up the fund in 30 years, how much do you need to save each year (starting this year) assuming you can get a semi-annually compounded return of 10% on your savings for the next 30 years?

a. $66,666.67
b. $11,595.56
c. $21,215.49
d. $30,744.90
e. $30,000.00

Answer: b

Question 4
The R&M Bank currently offers an investment account with an interest rate of 8% compounded semi-annually. R&M wants to offer customers another account with interest compounded monthly. If R&M wants the effective rates to be equal, what interest rate should R&M quote for the second account?

a. 7.87%
b. 8.00%
c. 8.16%
d. 24.00%

Answer: a

Question 5
The R&M Bank currently offers an investment account with an interest rate of 6% compounded monthly. R&M wants to offer customers another account with interest compounded quarterly. If R&M wants the effective rates to be equal, what interest rate should R&M quote for the second account?

a. 2.00%
b. 6.00%
c. 6.03%
d. 6.17%

Answer: c

Question 6
Amir has obtained a $250,000 mortgage. The mortgage is amortized over 25 years and the term of the mortgage is five years. The mortgage interest rate is 9% compounded semi-annually. Amir will begin making monthly payments at the end of the month. The monthly payment is closest to

a. $2,069.94.
b. $2,097.99.
c. $5,169.68.
d. $5,189.59.

Answer: a

Question 7
You borrow $50,000 on a line of credit to finance your startup company, to be repaid in three equal, annual payments with 10% interest. Approximately how much of the principal is paid off on the first payment?

a. $5000.00
b. $16,666.67
c. $15,105.74
d. $20,105.74

Answer: c

Question 8
The market yield of a 12-year 8 percent semi-annual-pay bond is 6.6 percent. The bond is callable in four years and its yield to call is 6.48 percent. What is the call price of the bond?

a. $1,125.46
b. $1,114.81
c. $1,085.94
d. $1,080.01

Answer: d

Question 9
The market yield of a twelve-year 7 percent annual-pay bond is 6 percent. The bond is callable in three years and its yield to call is 5.7 percent. What is the call price of the bond?

a. 1057.74
b. 1083.84
c. 1089.59
d. 1026.73

Answer: a

Question 10
Toronto Skates Inc. is paying dividends on a regular basis with a constant growth rate. The dividend last year was $ 1.00 and this year is $1.25. If the required rate of return is 12%, what is the price of the stock?

a. $10.42
b. $8.33
c. 5.00
d. Cannot be calculated

Answer: d

Question 11
Dream Homes Corporation had net earnings of $200,000 this past year and paid $80,000 in dividends on the company's equity of $1,800,000. Dream Homes has 500,000 shares outstanding with a current market value of $5. What is the firm's present value of growth opportunities if the required rate of return is 10.08 percent?

a. $0.77
b. $0.84
c. $0.86
d. $0.90

Answer: a

Question 12
MacLean Inc. currently pays no dividends. Today, the firm announced that it will pay its first dividend of $1 per share in four years, then $1.50 in each of the following three years, and the subsequent dividends are expected to grow at a constant rate of 5 percent per year. What is the stock price today if the risk-free rate is 4 percent and the risk premium associated with this stock is 6 percent?

a. $17.93
b. $19.40
c. $31.50
d. $34.73

Answer: b

Question 13
Macaroni Inc. announced that it would pay the following dividends over the next five years: $0.50, $0.75, $1.50, $3, and $4. Afterwards, dividends will decline at a rate of 3 percent per year indefinitely. What is the firm's current stock price if the required rate of return is 13%?

a. $30.33
b. $24.25
c. $19.24
d. $17.73

Answer: c

Question 14
Assume the following information from the financial statements of ReStateM Company:

Net income	$10,000
Depreciation	$3,000
Salaries	$5,000
Deferred income taxes	$2,000
Change in accounts receivable	$4,000
Change in accounts payable	–$5,000
Change in inventory	–$2,000
Capital expenditures	$1,500

The change in net working capital for ReStateM Company is:

a. Increase $7,000
b. Decrease $7,000
c. Increase $2,000
d. Decrease $2,000

Answer: a

Question 15
Assume the following information from the financial statements of ReStateM Company:

Net income	$10,000
Depreciation	$3,000
Salaries	$5,000
Increase in net working capital	$9,000
Capital expenditures	$4,000

The cash flow from operations for ReStateM is:
a. $22,000
b. –$22,000
c. $4,000
d. –$4,000

Answer: c

*Question 16
Ten years ago you borrowed $300000. The term of the loan was 20 years and required monthly payments of $3303.26. The interest rate on the loan was 12 percent compounded monthly. You have just made the 120th payment. What is the principal outstanding?

a. $191866.11
b. $230238.95
c. $150000.00
d. $212583.17

Answer: b

Question 17
Lottery A pays $1,000 today and Lottery B pays $1,750 at the end of five years from now. If the discount rate is 5%, I should choose

a. Lottery A, because it is available to me now.
b. Lottery A, because its future value is $1,276.
c. Lottery B, because its present value is $1,371 which is more than that of Lottery A.
d. Lottery B, because it pays $1,750 which is more than $1,000 from Lottery A.
e. Either option gives the same value over time.

Answer: c

Question 18
Montreal Financial Services Company offers a 50-year annuity of $50,000 per year with the first payment on January 1, next year. If your opportunity costs are constant over time, the price you are willing to pay for this annuity ___ over time.

a. increases
b. decreases
c. stays the same
d. can't determine without the opportunity cost

Answer: b

Question 19
Elvira is considering buying a 20-year ordinary annuity to provide her with retirement income. The annuity will make annual payments of $25,000. If her opportunity cost is 7%, what is the maximum she should pay for the annuity?

a. $1,096,629.42
b. $1,024,887.31
c. $283,389.88
d. $264,850.36

Answer: d

Question 20
Wilma borrows $10,000 from "Jaw Breaker Joe" and promises to repay Joe a total of $10,500 in one month. What is the effective annual interest rate charged by Joe?

a. 5.00%
b. 60.00%
c. 79.59%
d. 179.59%

Answer: c

Question 21
How much should a monthly compounded account with an EAR of 10% earn semi-annually?

a. 4.88%
b. 5.00%
c. 4.76%
d. 5.11%

Answer: a

Question 22
How much should a weekly compounded account with an EAR of 10% earn semi-annually?

a. 4.88%
b. 5.00%
c. 5.36%
d. 5.12%

Answer: d

Question 23
How much should a monthly compounded account with an EAR of 18% earn semi-annually?

a. 2.80%
b. 3.00%
c. 2.77%
d. 8.63%

Answer: d

Question 24
Amir has obtained a $250,000 mortgage. The mortgage is amortized over 25 years and the term of the mortgage is 25 years. The mortgage interest rate is 9% compounded annually. Amir will begin making annual payments of $25,451.56 at the end of the year. What is the principal outstanding immediately after Amir makes his third payment?

a. $50,903.12
b. $173,645.32
c. $185,574.60
d. $240,324.46

Answer: d

*Question 25
What is the yield to maturity on an 8-year, 9-percent bond that pays interest semi-annually, which is now priced at $980? Use a financial calculator.

a. 4.68 percent
b. 9 percent
c. 9.36 percent
d. 9.05 percent

Answer: c

Question 26
LaMaudite Lager Inc. has semi-annual pay bonds that trade with a yield to maturity of 7 percent. The bonds have a six-year term to maturity and are currently selling for $1,067.20. The coupon rate of the bond is closest to:

a. 4.95%.
b. 8.39%.
c. 8.41%.
d. 15.69%.

Answer: b

Question 27
A pension fund pays out $50,000 a year in perpetuity, based on a cost of capital of 5%, to retiring employees. Alternatively, the employee can take out a lump sum of $1 million payable immediately. The employee should choose

a. the lump sum, because it is available now.
b. the lump sum, because its future value is $25 million.
c. the pension fund, because its present value is $1.25 million.
d. the pension fund, because it offers steady payments in perpetuity.
e. either option gives the same value over time.

Answer: e

Question 28
What is the YTM of a four-year annual pay bond with a par value of $1,000 and a 4 percent coupon rate when the bond is priced at $932.35?

a. 2.96%
b. 5.92%
c. 5.95%
d. 11.90%

Answer: c

Question 29
What is the YTM of a four-year semi-annual pay bond with a par value of $1,000 and a 4 percent coupon rate when the bond is priced at $932.35?

a. 2.96%
b. 5.92%
c. 5.95%
d. 11.90%

Answer: b

Question 30
Maple Drinks Corp. has just announced a dividend of $0.80 for this year and $0.835 for the next year. Dividends are expected to grow at a constant rate indefinitely. What is the current stock price if the required return is 13.1 percent?

a. $8.55
b. $9.35
c. $9.57
d. $10.37

Answer: c