

Assignment 3

Name _____
Student ID _____

All questions are worth two (one mark for the correct answer and one mark for the formula used to find the answer). If more space is required to show the formula please attach papers to the assignment. The assignment must be done individually.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 1) Calculate the amount of interest that will be charged on \$7000.00 borrowed for five months at 5.5%. 1) _____
- 2) Find the exact interest on \$875.00 at 11.5% p.a. from May 29, 2001 to August 13, 2001. 2) _____
- 3) Determine the deposit that must be made to earn \$49.27 in 325 days at 11%. 3) _____
- 4) A bank pays an interest of 4.5% for a three month term deposit. Calculate the amount that Stacy must invest to earn an interest of \$100.00. 4) _____
- 5) Determine the deposit that must be made to earn \$49.27 in 325 days at 11%. 5) _____
- 6) What principal will earn \$219.89 interest at 11.25% p.a. from November 16, 2003 to February 7, 2004? 6) _____
- 7) If Inez is charged an interest of \$42.95 on a loan of \$950.00 for seven months, calculate the rate of interest charged on the loan. 7) _____
- 8) An investment of \$12000.00 earns an interest of \$480.00. Calculate the time in months if the interest rate is 6%. 8) _____
- 9) Determine the number of days it will take \$478.00 to earn \$17.09 at $7\frac{3}{4}\%$. 9) _____
- 10) What rate of interest is required for \$940.48 to earn \$42.49 interest from September 30, 2002, to March 4, 2003? 10) _____
- 11) What payment is required to pay off a loan of \$1750.00 at 7.25% fourteen months later? 11) _____
- 12) In how many months will \$3500 grow to \$4845.94 at 10.25% p.a.? 12) _____
- 13) What principal will have a maturity value of \$100000.00 at 5.0% p.a. in 18 months? 13) _____
- 14) A loan payment of \$1700 was due 60 days ago and another payment of \$1200 is due 45 days from now. What single payment 90 days from now will pay off the two obligation if interest is to be 14% and the agreed focal date is 90 days from now? 14) _____

- 15) Debt payments of \$800.00 due now and \$1400.00 due in five months are to be repaid by a payment of \$1000.00 in three months and a final payment in eight months. Calculate the size of the final payment if interest is 6% 15) _____
- 16) Debt payments of \$1610.00 due today, \$725.00 due in 101 days and \$670.00 due in 296 days respectively are to be combined into a single payment to be made 170 days from now. What is that single payment, if money is worth 9.5% p.a. and the agreed focal date is 170 days from now? 16) _____
- 17) Debt payments of \$500.00, \$1000.00, \$1500.00 are due on March 1, May 1, and December 1 of the same year. If interest is 8% calculate the single payment on August 1 of the same year that would replace the three payments. 17) _____
- 18) Debt payments of \$1170.00 due two months ago and \$1243.00 due today respectively are to be repaid by a payment of \$1505.00 in one month and the balance in four months. If money is worth 8.4% p.a. and the agreed focal date is four months from now, what is the size of the final payment? 18) _____
- 19) Two obligations of \$835 each, due 90 days ago and 35 days ago respectively, are to be settled by two equal payments to be made today and 65 days from now respectively. If interest allowed is 8.75% and the agreed focal date is today, what is the size of the equal payments? 19) _____
- 20) Debts of \$1480.00 due four months ago and \$1385.00 due in one month are to be settled by two equal payments due now and nine months from now respectively. Find the size of the equal payments at 12% p.a. with the agreed focal date now. 20) _____
- 21) A loan of \$3325.00 is to be repaid by three equal payments due in 102 days, 157 days and 189 days respectively. Determine the size of the equal payments at 12.15% p.a. with a focal date of today. 21) _____
- 22) A loan of \$1000 taken out on January 1 requires equal payments on February 1, March 1, and April 1. If the focal date is April 1, what is the size of the equal payments at 6.0%? 22) _____
- 23) A loan of \$1825 taken out on March 10 requires equal payments on April 30, June 19, and August 3, and a final payment of \$700 on September 30. If the focal date is September 30, what is the size of the equal payments at 8.6%? 23) _____
- 24) Payments of \$1430 due one year ago and \$1175 due with interest of 6% in nine months are to be settled by three equal payments due today, seven months from now, and one year from now at 7.5%. Determine the size of the equal payments if the agreed focal date is one year from today. 24) _____

25) For the following promissory note, determine the amount of interest due at maturity. 25) _____

\$1195.00 Ottawa, Ontario January 29, 2001. Nine months after date we promise to pay to the order of Badger Lumber Company *****EXACTLY***** 1195.00*****DOLLARS at Badger Lumber Company for value received with interest at 11.25% per annum.
Due _____ (Seal) _____
(Seal) _____

26) Find the compound amount of \$5700.00 at 11.2% p.a. for seven years compounded monthly. 26) _____

27) Determine the accumulated value of \$4100.00 compounded semi-annually at 8% p.a. for seven years. 27) _____

28) Calculate the accumulated value of \$3000.00 compounded at 8% compounded quarterly for fifteen years. How much of the amount is interest? 28) _____

29) How much will a registered retirement savings deposit of \$13500.00 be worth in 11 years at 8.44% compounded quarterly? How much of the amount is interest? 29) _____

30) How much will a registered retirement savings deposit of \$10000.00 be worth in 15 years at 6.00% compounded quarterly? How much of the amount is interest? 30) _____

31) Darcy's parents made a trust deposit of \$3500.00 on October 31, 2002, to be withdrawn on Darcy's eighteenth birthday on July 31, 2016. To what will the deposit amount on that date at 13.48% compounded quarterly? 31) _____

32) Orange Credit Union expects an average annual growth rate of 16% for the next four years. If the assets of the credit union currently amount to \$2.7 million, what will the forecasted assets be in four years? 32) _____

33) GBC Credit Union expects an average annual growth rate of 10% for the next 10 years. If the assets of the credit union currently amount to \$50 million, what will the forecasted assets be in ten years? 33) _____

34) Use the exact method to determine the accumulated value of \$3875.00 due in 61 months compounded annually at 9.75% p.a. 34) _____

35) Suppose \$4320.00 is invested for five years, eight months at 8.25% compounded annually. What is the compounded amount? 35) _____

36) Find the maturity value of a promissory note for \$1400.00 dated March 31, 2001, and due on August 31, 2006, if interest is 7.64% compounded quarterly. 36) _____

- 37) Find the sum of money that accumulates to \$11415.00 at 7.6% compounded quarterly in six years, seven months. 37) _____
- 38) Calculate the proceeds of \$8956.00 due in seven years, eleven months discounted at 7.5% compounded semi-annually. 38) _____
- 39) A seven-year, non-interest-bearing note for \$6532.00 is discounted three years and two months before its due date at 9.12% compounded quarterly. Find the proceeds of the note. 39) _____
- 40) Jason deposited \$100.00 at the end of each month for five years into an account paying 6% compounded monthly. What will be the balance in the account at the end of the five-year term? 40) _____
- 41) To what will deposits of \$47.00 made at the end of each month amount to after seven years if interest is 10.8% compounded monthly? 41) _____
- 42) Find the amount to which semi-annual deposits of \$200.00 will grow in four years at 6.6% p.a. compounded semi-annually. 42) _____
- 43) Find the amount to which monthly deposits of \$100.00 will grow in five years at 4.8% p.a. compounded monthly. 43) _____
- 44) Leanne Simon made ordinary annuity payments of \$81.00 per month for fourteen years earning 9% compounded monthly. How much interest is included in the future value of the annuity? 44) _____
- 45) The Olfert Contractors, Inc., are saving \$958.00 every month in order to purchase a new paving machine in twelve years. Their savings certificates pay 6% p.a. compounded monthly. How much of the maturity value will be interest? 45) _____
- 46) Mr. and Mrs. Fox have each contributed \$1825.00 per year for the last eight years into RRSP accounts earning 6.93% compounded annually. Suppose they leave their accumulated contributions for another five years in the RRSP at the same rate of interest.
 a) How much will Mr. and Mrs. Fox have in total in their RRSP accounts?
 b) How much did the Fox's contribute?
 c) How much will be interest? 46) _____
- 47) A man put aside \$5710.00 at the end of every 3 months for seven years. How much will he have six years after the least deposit, if his account earned 5.6% p.a. compounded quarterly? 47) _____
- 48) Find the present value of semi-annual payments of \$810.00 for five years at 5.45% p.a., compounded semi-annually. 48) _____
- 49) An installment contract for the purchase of a computer requires payments of \$30.00 at the end of each month for the next three years. Suppose interest is 18.00% p.a. compounded monthly.
 a) What is the amount financed?
 b) How much is the interest cost? 49) _____