KFUPM	Term 171	Date: 22/11/2017
Mathematics & Statistics	AS 201	Duration: 40 minutes
	Quiz# 3	
Name:	ID #:	Section:

Q1: A 20-year loan of 20,000 may be repaid under the following two methods: (i) amortization method with equal annual payments at an annual effective interest rate of 6.5% (ii) sinking fund method in which the lender receives an annual effective interest rate of 8% and the sinking fund earns an annual effective interest rate of j Both methods require a payment of X to be made at the end of each year for 20 years. Calculate j.

(A) 6.4% (B) 7.6% (C) 8.8% (D) 11.2% (E) 14.2%

Q2: Seth borrows X for four years at an annual effective interest rate of 8%, to be repaid with equal payments at the end of each year. The outstanding loan balance at the end of the third year is 559.12. Calculate the principal repaid in the first payment.

(A) 444 (B) 454 (C) 464 (D) 474 (E) 484

Q3: A 10,000 par value 10-year bond with 8% annual coupons is bought at a premium to yield an annual effective rate of 6%. Calculate the interest portion of the 7th coupon.

(A) 632 (B) 642 (C) 651 (D) 660 (E) 667

Q4: Matt purchased a 20-year par value bond with an annual nominal coupon rate of 8% payable semiannually at a price of 1722.25. The bond can be called at par value X on any coupon date starting at the end of year 15 after the coupon is paid. The lowest yield rate that Matt can possibly receive is a nominal annual interest rate of 6% convertible semiannually. Calculate X.

(A) 1400 (B) 1420 (C) 1440 (D) 1460 (E) 1480