

24.

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 rate of 6.5%
- ii) sinking fund method in which the lender receives an annual effective rate of 8% and the sinking fund earns an annual effective 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)  $j \leq 6.5\%$
- (B)  $6.5\% < j \leq 8.0\%$
- (C)  $8.0\% < j \leq 10.0\%$
- (D)  $10.0\% < j \leq 12.0\%$
- (E)  $j > 12.0\%$