

FA Module 10 Debt amortization practice exam questions

(The attached PDF file has better formatting.)

A firm issues a five year 4% annual coupon 100,000 par value bond on December 31, 20X1. The interest expense on the bond in 20X6 is 4,501. The firm reports under IFRS.

Question 10.1: Interest paid

What is the interest paid in 20X6?

Answer 10.1: $4\% \times 100,000 = 4,000$

(interest paid = par value \times coupon rate)

Question 10.2: Accrual of discount or amortization of premium

What is the amortization of premium (accrual of discount) in 20X6?

Answer 10.2: $4,000 - 4,501 = (501)$

(amortization of premium = interest paid – interest expense)

Question 10.3: Carrying value

What is the carrying value of the bond on December 31, 20X5?

Answer 10.3: $100,000 - 501 = 99,499$

(carrying value at the end of the year = carrying value at the beginning of the year – amortization of premium or + accrual of discount)

Question 10.4: Yield to maturity

What is the yield to maturity on December 31, 20X1?

Answer 10.4: $4,501 / 99,499 = 4.5237\%$

(yield to maturity (constant in all years) = interest expense / carrying value at the beginning of the year)

Question 10.5: Sale price

What is the sale price of the bond on December 31, 20X1?

Answer 10.5:

$4,000 \times (1.045237^{-1} + 1.045237^{-2} + 1.045237^{-3} + 1.045237^{-4}) + 104,000 \times 1.045237^{-5} = 97,702.49$

(sale price = present value of future cash flows)

<<** Excel table: workbook=robinson fexprs tables; worksheet=bondAmortReverse set = 1

FA Module 10 Debt amortization practice exam questions

(The attached PDF file has better formatting.)

A firm issues a five year 4% annual coupon 100,000 par value bond on December 31, 20X1. The interest expense on the bond in 20X6 is 4,501. The firm reports under IFRS.

Question 10.1: Interest paid

What is the interest paid in 20X6?

Answer 10.1: $4\% \times 100,000 = 4,000$

(interest paid = par value \times coupon rate)

Question 10.2: Accrual of discount or amortization of premium

What is the amortization of premium (accrual of discount) in 20X6?

Answer 10.2: $4,000 - 4,501 = (501)$

(amortization of premium = interest paid – interest expense)

Question 10.3: Carrying value

What is the carrying value of the bond on December 31, 20X5?

Answer 10.3: $100,000 - 501 = 99,499$

(carrying value at the end of the year = carrying value at the beginning of the year – amortization of premium or + accrual of discount)

Question 10.4: Yield to maturity

What is the yield to maturity on December 31, 20X1?

Answer 10.4: $4,501 / 99,499 = 4.5237\%$

(yield to maturity (constant in all years) = interest expense / carrying value at the beginning of the year)

Question 10.5: Sale price

What is the sale price of the bond on December 31, 20X1?

Answer 10.5:

$4,000 \times (1.045237^{-1} + 1.045237^{-2} + 1.045237^{-3} + 1.045237^{-4}) + 104,000 \times 1.045237^{-5} = 97,702.49$

(sale price = present value of future cash flows)