FA Module 10 Capitalized interest practice exam questions

covering financial leverage, carrying value, interest expense, depreciation, estimated useful life, shareholders' equity, capitalized interest

(The attached PDF file has better formatting.)

On January 1, 20XX, a firm has 200 of shareholders' equity, 200 of cash, and no other assets or liabilities. It takes a one year loan for 389 at a 6% coupon rate, and it pays the 389 to a contractor to construct a home office, which is completed by December 31, 20XX. The home office has a 6 year useful life and no salvage value, and the firm uses straight line depreciation. The firm has no other revenue or expenses in 20XX.

Question 10.1: Interest costs of the construction loan

What are the interest costs of the construction loan in 20XX?

Answer 10.1: 389 × 6% = 23.34

(interest costs of the construction loan in 20XX = loan par value × coupon rate)

Question 10.2: Depreciation with capitalized interest

If the firm capitalizes the interest costs of the construction loan, what is the depreciation on the home office in 20XX+1?

Answer 10.2: (389 + 23.34) / 6 = 68.72

(depreciation = (purchase price + capitalized interest) / estimated useful life)

Question 10.3: Financial leverage

If the firm expenses the interest costs of the loan, what is its financial leverage on December 31, 20XX?

Answer 10.3: (200 + 389 – 389 × 6%) / (200 – 389 × 6%) = 3.20

(Initial assets + carrying value of home office – interest expense) / (initial equity – interest expense)

Question 10.4: Depreciation

If the firm expenses the interest costs of the construction loan, what is the depreciation on the home office in 20XX+1?

Answer 10.4: 389 / 6 = 64.83

(depreciation = purchase price / estimated useful life)

Question 10.5: Financial leverage with capitalized interest

If the firm capitalizes the interest costs of the loan, what is its financial leverage on December 31, 20XX?

Answer 10.5: (200 + 389) / (200) = 2.95

(financial leverage = assets / shareholders' equity =
(Initial assets + carrying value of home office + capitalized interest – interest expense) / (initial equity) )

Question 10.6: Depreciation with capitalized interest

If the firm capitalizes the interest costs of the construction loan, what is the depreciation on the home office in 20XX+1?

Answer 10.6: (389 + 23.34) / 6 = 68.72

(depreciation = (purchase price + capitalized interest) / estimated useful life)