APS 1016: Revision Notes

Question 1:

Red Zep

D/E: 3:1

Total Earnings this year: $140,000

1. Determine maximum capital spending with no new equity.
   1. $560,000
2. If Capital expenditure requirement for the year area == $770,000, will Red Zep pay a dividend?
   1. No.
3. Does Red Zep maintain a residual dividend payout?
   1. No.

Question 2:

Stock Valuation

Sunny Corp. following dividends next four years. After that, Co maintain 5% growth in dividends forever – If the required rate of return is 16%, what is the current stock price.

$6.50, $5, $3, $2

TV = 2(1.05)/(0.16-0.05) = $19.09

NPV = $22.89

Question 3:

Bond Valuation

PV of bond – PV coupons + PV face value

Question 4:

Cu Corp issued 12-year bonds two years ago, at a coupon rate of 7.8%. Bonds make semi-annual payments. Bonds currently sell for 108% of par value. What is the bonds yield to maturity?

Financial calculator process for calculation:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| MODE | P/Y | C/Y | PMT | N | PV | FV | I/Y |
| END | 2 | 2 | 3.9 | 20 | -108 | 100 | 6.69% |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

MODE = END OF YEAR

P/Y = NUMBER OF PAYMENTS PER YEAR

C/Y = COMPOUNDED PER YEAR

PMT = PAYMENT AMOUNT

N = NUMBER OF PAYMENTS

PV = FACE VALUE TODAY (-IVE)

FV = FACE VALUE AT ISSUE

I/Y = YIELD

Question 5:

Operating Cash Flow

Initial investment = $1.65 million

CCA rate (Capital Cost Allowance) (Depreciation Rate) = 30%

Annual sales = $1,925,000

Annual Costs = $95,000

Tax rate = 40%

Calculate operating cash flows for each of the three years

OCF = (S-C)(1-TC)+TC\*D

|  |  |
| --- | --- |
| S | 1925000 |
| C | 595000 |
| Tax | 0.4 |
| CCA | 0.3 |
| Investment | 1650000 |
| CCA Y1 | 247500 |
| OCF Year 1 | 897000 |
| CCA Y2 | 420750 |
| OCF Y2 | 966300 |
| CCA Y3 | 294525 |
| OCF Y3 | 915810 |

Question 6:

Which one to invest?

Two Machines. Discount rate 14%

|  |  |  |
| --- | --- | --- |
|  | Tech 1 | Tech 2 |
| Cost | 330000 | 480000 |
| Life (years) | 3 | 5 |
| Pre-tax operating cost/year | 41000 | 33000 |
| Salvage value | 20000 | 20000 |
| Tax rate | 35% | 35% |

2 is better

Question 7:

Replacement Decision

New excavator in the market

Market value dropped from $400,000 a year ago to $350,000 today.

10 years, it will be worth $5,000

New excavator costs $775,000

Increase operating revenue by $65,000/year

Ten year life -> Salvage Value $100,000

Tax rate 40%

CCA rate 25%

Cost of capital 14%

Question 8:

Capital Cost Structure

VL = VU­+T\*B

Re = RU + (RU­-RD)(D/E)(1-TC)