Formula Sheet for Final Exam

1. Enterprise Value = Equity + Net Debt,
   where Net Debt = Debt – Cash

2. (Firm) Free Cash Flow = EBIT (1-τ_c) + Depreciation & Other Non-Cash Items – Capital Expenditures – Δ Net Working Capital,
   where t_c is the marginal income tax rate.

3. Equity Free Cash Flow = (EBIT – Interest) x (1 - τ_c) + Depreciation & Other Non-Cash Items – Capital Expenditures – Δ Net Working Capital + Δ Debt

4. Liquidation or Salvage Value = Sale Price – (τ_c x Capital Gain),
   where Capital Gain is the difference between Sale Price and Book Value.

5. Growing perpetuity formula: $PV = \frac{CF_1}{r-g}$,
   where r is the discount rate, g the growth rate, and CF_1 the cash flow realized one period from now.

6. Growing annuity formula: $PV = \frac{CF_1}{r-g}\left[1 - \left(\frac{1+g}{1+r}\right)^N\right]$,
   where N is the number of periods the annuity is paid.

7. Earnings Growth Rate = (1- Payout Rate) x Return on New Investment

8. CAPM: $r_i = r_f + \beta_i \times MRP$,
   where r_f is the risk-free rate, β_i the asset's beta and MRP the market risk premium.

9. After-tax company cost of capital: $r_{wacc} = \frac{E}{E+D} r_E + \frac{D}{E+D} r_D(1-\tau_c)$,

   where E and D refer to Equity and (net) Debt, respectively.

10. Assuming that the risk of tax shields is equal to the risk of unlevered assets:

    $r_E = r_u + \frac{D}{E}(r_u - r_D)$ and $\beta_E = \beta_u + \frac{D}{E}(\beta_u - \beta_D)$,

    where r_u is the unlevered cost of capital and β_u is the unlevered asset beta.

11. Assuming that the risk of tax shields corresponds to the risk of debt:

    $r_E = r_u + \frac{D}{E}(r_u - r_D)(1-\tau_c)$ and $\beta_E = \beta_u + \frac{D}{E}(\beta_u - \beta_D)(1-\tau_c)$