EC 313, Fall 2019 **Name:** _____
Xiang LI (GE)
Midterm 1 - Equation Sheet **UO ID:** _____

Work on this page will not be graded.

growth rate of X at time t: $\frac{X_t - X_{t-1}}{X_{t-1}} \times 100\%$

GDP deflator: nominal GDP / real GDP

Future value: $FV_n = PV \times (1+i)^n$

Present value: $PV = \frac{FV_n}{(1+i)^n}$

Fixed-Payment Loan: Loan Value $= \frac{FP}{(1+i)} + \frac{FP}{(1+i)^2} + \frac{FP}{(1+i)^3} + \ldots + \frac{FP}{(1+i)^n}$

Coupon Bond: Price $= \frac{C}{(1+i)} + \frac{C}{(1+i)^2} + \frac{C}{(1+i)^3} + \ldots + \frac{C}{(1+i)^n} + \frac{F}{(1+i)^n}$

Coupon payment: $C = c \times F$

Discount Bond: Price $= \frac{F}{(1+i)^n}$

Holding Period Return: $R = \frac{C + P_{t+1} - P_t}{P_t} = i_c + g$

Current Yield: $i_c = \frac{C}{P_t}$

Capital Gain: $g = \frac{P_{t+1} - P_t}{P_t}$

Fisher Equation: $i = r + \pi^e$

PV: present value (in \$); FV_n: future value in n years (in \$);

n: years to maturity; i: (nominal) interest rate (in %);

FP: fixed payment (in \$); C: coupon payment (in \$);

c: coupon rate (in %); F: face value (in \$);

P_t: price at year t (in \$); P_{t+1}: price at year t+1(in \$);

r: real interest rate (in %); π^e: expected inflation (in %).