Directions: Please answer the following questions and make sure your answer are legible. If you
don’t show work and/or I can’t follow it, I won’t give partial credit. You may use a calculator (not
the calculator function on other technology) and the Formula Sheet that I provide you, nothing
else. Good Luck.

1. (7 points) Two years ago (On Oct 22 2013) you bought a share of Papa John’s stock for $72.70.
In October of 2014 the stock underwent a 2:1 split. Currently (Oct 22, 2015) Papa John’s stock
is selling for $69.47 a share. In August 2015 Papa John’s stock paid out a dividend of $0.1750.

(a) What is the current dividend yield for Papa John’s stock?

(b) What is the Compound Annual Growth Rate (rate of return) for the capital gains/losses
for this stock over the past 2 years?

(c) What is the approximate total rate of return from owning this stock?

\[
\text{Div. Yield} = \frac{0.1750}{69.47} = 0.0101 \text{ or } 1.01 \%
\]

\[
\text{CAGR} = \left( \frac{P_{2015}}{P_{2013}} \right)^{\frac{1}{2}} - 1
\]

\[
P_{2015} = 69.47 \quad P_{2013} = 72.71
\]

\[
h = 2
\]

\[
i = \left( \frac{138.94}{72.71} \right)^{\frac{1}{2}} - 1
\]

\[
CAGR = 3.83\%
\]
2. (8 points) A $5000 par value bond is selling for $4,750, the coupon rate is 4.75%, the interest payments are semi-annual. The bond has a maturity date of Feb. 20, 2030

(a) How much is each semiannual interest payment?
(b) What is the current yield of this bond?
(c) Is this bond selling at a premium, at par or at a discount?
(d) How much will the buyer of this bond receive on Feb. 20, 2030?

\[ a) \quad J = \frac{P \times R \times T}{2} \]
\[ J = ? \]
\[ P = 5000 \]
\[ R = 0.0475 \]
\[ T = \frac{1}{2} \]
\[ J = 2 \times 0.0475 \times 5000 \]
\[ J = 475 \]

\[ b) \quad J = \frac{P \times R \times T}{2} \]
\[ J = 11 \times 0.75 \]
\[ P = 4750 \]
\[ R = ? \]
\[ T = \frac{1}{2} \]
\[ \frac{11 \times 0.75}{4750 \times \frac{1}{2}} = R \]
\[ 0.05 = R \]
\[ S\% = \text{current yield} \]

(c) It is below
\[ (4750 \text{ is below par value}) \]

(d) $5000