

This examination paper must be returned intact. No part may be removed from the examination room.

Family name:
Other names:
Student ID:



AFIN 253
Financial Management
DIAGNOSTIC TEST: WEEK 4

Time allowed: 40 minutes.

Instructions

1. Writing is not permitted in reading time. All pens, pencils and highlighters must be on your desk.
2. There are **10** multiple choice questions. Select the 'one best' answer choice for each question. Answers to these must be recorded on a red-coloured General Purpose Answer Sheet which will be marked by a computer. Please make sure your name is on this sheet. Answers on the test question paper will not be marked.
3. **Materials Permitted**
 - A non-programmable calculator without text storage capability is permitted.
 - Financial calculators may be used.
 - Dictionaries may not be used.
 - Mobile phones must be turned off and left at the front of the examination room.
 - Bags must be left at the front of the room.

Select the one best answer choice for each question

Question 1: A 2 year government bond yields 5% pa with a coupon rate of 6% pa, paid semi-annually.

Find the effective six month rate, effective annual rate and the effective daily rate. Assume that each month has 30 days and that there are 360 days in a year.

All answers are given in the same order: $r_{eff\ semi-annual}$, $r_{eff\ yrly}$, $r_{eff\ daily}$.

- (a) 0.024695, 0.05, 0.000136.
- (b) 0.025, 0.050625, 0.000137.**
- (c) 0.029563, 0.06, 0.000162.
- (d) 0.03, 0.06, 0.000167.
- (e) 0.03, 0.0609, 0.000164.

Question 2: A 90-day Bank Accepted Bill has a face value of \$1,000,000. The interest rate is 6% pa and there are 365 days in the year. What will be its price?

- (a) \$13,369,963.37
- (b) \$6,400,000.00
- (c) \$985,735.05
- (d) \$985,421.17**
- (e) \$156,250.00

Question 3: The following equation is the Dividend Discount Model, also known as the 'Gordon Growth Model' or the 'Perpetuity with growth' equation.

$$P_0 = \frac{d_1}{r_{eff} - g_{eff}}$$

Which expression is **NOT** equal to the expected capital return?

- (a) g_{eff}
- (b) $(P_1/P_0) - 1$
- (c) $(d_5/d_4) - 1$
- (d) $(d_1/P_0) - 1$**
- (e) $(P_1 - P_0)/P_0$

Question 4: A three year bond has a face value of \$100, a yield of 6% and a fixed coupon rate of 12%, paid semi-annually. What is its price?

- (a) \$116.25**
- (b) \$74.04
- (c) \$85.89
- (d) \$83.75
- (e) \$71.38

Question 5: You want to buy an apartment priced at \$500,000. You have saved a deposit of \$50,000. The bank has agreed to lend you the \$450,000 as an **interest only** loan with a term of 30 years. The interest rate is 6% pa and is not expected to change. What will be your monthly payments?

- (a) \$ 1,250.00
- (b) \$ 2,250.00**
- (c) \$ 2,652.17
- (d) \$ 2,697.98
- (e) \$ 32,692.01

Question 6: A share just paid its semi-annual dividend of \$10. The dividend is expected to grow at 2% every 6 months forever. This 2% growth rate is an effective **6 month** rate. Therefore the next dividend will be \$10.20 in six months. The required return of the stock 10% pa, given as an effective **annual** rate.

What is the price of the share now?

- (a) \$127.50
- (b) \$171.14
- (c) \$173.33
- (d) \$174.56
- (e) \$354.06**

Question 7: A share was bought for \$10 and paid its annual dividend of \$0.50 one year later (at $t=1$ year).

Just after the dividend was paid, the share price was \$11 (at $t=1$ year). What was the total return, capital return and income return? Calculate your answers as effective annual rates.

The choices are given in the same order:

The choices are given in the same order: $r_{total}, r_{capital}, r_{dividend}$.

- (a) -0.15, -0.1, -0.05.
- (b) 0.05, 0.15, 0.1.
- (c) 0.1, 0.05, 0.05.
- (d) 0.15, 0.05, 0.1.
- (e) 0.15, 0.1, 0.05.**

Question 8: Bonds X and Y are issued by different companies, but they both pay a semi-annual coupon of 10% pa and they have the same face value (\$100), maturity (3 years) and yield (10%) as each other.

Which of the following statements is true?

- (a) Bonds X and Y are premium bonds.
- (b) Bonds X and Y are discount bonds.
- (c) Bond X is a discount bond but bond Y is a premium bond.
- (d) Bond X is a premium bond but bond Y is a discount bond.
- (e) Bonds X and Y are par bonds.**

Question 9: A wholesale store offers credit to its customers. Customers are given 60 days to pay for their goods, but if they pay immediately they will get a 1.5% discount. What is the effective interest rate implicit in the discount being offered? Assume 365 days in a year and that all customers pay either immediately or the 60th day. All of the below answer choices are given as effective annual interest rates.

- (a) 0.0003
- (b) 0.0878
- (c) 0.0913
- (d) 0.0948
- (e) 0.0963**

Question 10: For certain shares, the forward-looking Price-Earnings Ratio ($P_0/EP S_1$) is equal to the inverse of the share's total expected return ($1/r_{total}$). For what shares is this true?

Note that a stock's payout ratio is equal to dividends per share (DPS) divided by earnings per share (EPS).

- (a) Shares of companies with a 100% payout ratio and high expected growth in earnings and dividends.
- (b) Shares of companies with a 100% payout ratio and negative expected growth in earnings and dividends.
- (c) Shares of companies with a 100% payout ratio and no expected growth in earnings or dividends.**
- (d) Shares of companies with a 0% payout ratio and no expected growth in earnings or dividends.
- (e) Shares of companies with a 0% payout ratio and negative expected growth in earnings and dividends.