ACCT 592 - SPRING 2011
RESEARCH PROJECT - EARNINGS PER SHARE

For each situation described below, compute earnings per share. You will need to research the answers in FASB 128 in the *Original Pronouncements as Amended* or in the *Current Text*.

Attach well-organized, neat schedules of your computations including assumptions made and references to the pronouncements to justify your position. If you use Excel, be sure the assumptions used are obvious and not just buried in formulas.

VLT Corporation net income for 2010 $217,194,356
Tax rate 40%

Stock prices for VLT are provided in an Excel file available at [http://www.cbe.uidaho.edu/Acct592](http://www.cbe.uidaho.edu/Acct592) (see the Financial Statement Disclosure Project). The average stock price for 2010 was $42.02. You have daily stock price information available so that you can determine average prices during any portion of the year.

Capital Structure for VLT Corporation

<table>
<thead>
<tr>
<th>Common stock $1 par value. At 1/1/10, there were 15,000,000 shares issued &amp; 1,600,000 treasury shares making the shares outstanding equal to 13,400,000 shares VLT issued 2,000,000 additional shares on 3/1/10 There was a 10% stock dividend on 8/1/10</th>
<th>13,400,000 shares</th>
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</thead>
<tbody>
<tr>
<td>Treasury stock, balance at 1/1/10 (cost $23.96 each) 600,000 shares sold on 1/31/10 for $34.88 each and 1,000,000 additional shares acquired 11/1/10 for $57.26 each</td>
<td>1,600,000 shares</td>
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<tr>
<td>Preferred stock $100 par value, shares outstanding at 1/1/10 The stock is cumulative and convertible into 40 shares of common stock (before any 2010 stock splits or stock dividends). An additional 500,000 shares issued were issued at par on 6/1/10. The stock pays a $8.00 annual dividend paid on July 15 and January 15. Total dividends declared on preferred stock during 2010 were $6,000,000.</td>
<td>500,000 shares</td>
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VLT Corporation uses the effective interest method to amortize bond premiums and discounts

1. Determine the weighted average shares of common stock outstanding during 2010. Compute earnings per share assuming that the preferred stock is the only potentially dilutive security.
2. Same as #1 except VLT Corporation has convertible bonds outstanding with a face value of $40,000,000. The bonds pay 8% interest semiannually on January 1 and July 1. The bonds were sold to yield 7%. The carrying value of the bonds on 12/31/09 was $44,499,090. Each $1,000 bond can be converted into 200 shares of common stock (before any 2010 stock dividends or stock splits).

Compute earnings per share assuming that there are no potentially dilutive securities other than the convertible preferred stock and the convertible bonds.

3. Same as #2 except that VLT Corporation had 10,000,000 fully vested options outstanding at the beginning of the year. The option price to employees was $30 and each option entitled the employee to purchase one share of common stock. During the week before the July 31 expiration date, employees exercised 9,900,000 options at an average price of $37.64 per share. The remaining 100,000 options expired on July 31, 2010. The fair value of the options on the grant date was 6.65.

Compute earnings per share. Note that you will need to recompute the weighted average shares of common stock because the options were exercised and additional shares of common stock were issued.

4. Same as #2 except that VLT Corporation had 5,320,000 options outstanding at the beginning of the year. The option price to employees was $36.04 and each option entitled the employee to purchase one share of common stock. Due to turnover, 500,000 of the options were forfeit on March 1, 2010. The remaining 4,820,000 options became fully vested on May 1. Employees exercised 4,815,000 options on June 15, 2010 for an average market price of $43.69 per share. The remaining 5,000 options expired on July 31, 2010. At the beginning of the year, 4 months of the 24 month service period remained. The fair value of the options according to the Black-Sholes option pricing model was $4.21 each. (All amounts have been adjusted for stock dividends and splits in earlier years but not for any stock dividends or stock splits during 2010).

Total additional paid in capital from excess tax deductions related to earlier issues of employee options was $2,368,500 at the beginning of the year.

Hint: Compute earnings per share assuming that there are no potentially dilutive securities other than the convertible preferred stock (#1) plus the options (#4) and the convertible bonds (#2). Do not include the options from #3. You will have to do a new weighted average computation for common stock outstanding.

5. Same as #4 except that VLT Corporation also issued 10,000,000 options to employees on September 1, 2010 when the market price of common stock was $37.59 per share. These options entitle the employees to acquire one share of common stock for $37.59 during a six month exercise period beginning September 1, 2012. The fair value of the options according to the Black-Sholes option pricing model was $7.32 each. Using a 3% turnover rate, VLT recognized $11,478,980 in compensation expense related to these options during 2010 and the remaining unrecognized compensation at year end was $57,394,900. Total additional paid in capital from excess tax deductions related to earlier issues of employee options was $2,368,500 at the beginning of the year plus any additional amount related to the exercise of options in #4 above.

If you do this one correctly, it should be earnings per share for VLT Corporation project.
6. Same as #2 except that the convertible bonds participate in dividend paid to common shareholders. After the common stock has been paid a dividend of $.50 per share, the bondholders then participate in any additional dividends on a 40:60 ratio with the common shareholders. The bondholders receive common stock dividends based on the number of shares of common stock that the bonds are convertible into. The bondholders do not have any voting rights prior to actual conversion of their bonds into shares of common stock. For 2010, the common shareholders were paid $1.10 per share to holders of record on Sept. 1, 2010.

Compute basic and diluted EPS under the two-class method. (Hint: There is a specific example in the ASC similar to this problem. Everyone should be able to do basic earnings per share from this example and diluted EPS will be extra credit since the illustrations all seem to stop with basic.) THIS IS THE ONLY “REAL” ASC RESEARCH QUESTION.

7. Same as #5 except that VLT has two additional convertible bond issues and another type of cumulative preferred stock outstanding for all or part of the year.

a. Convertible bonds outstanding with a face value of $90,000,000. The bonds pay 10% interest semiannually on January 1 and July 1 and were originally sold to yield 9.25%. The carrying value of the bonds on 12/31/09 was $94,063,420. Each $1,000 bond can be converted into 440 shares of common stock after the stock dividend. No bonds were converted during the year.

b. On April 1, 2010, VLT issued $600,000,000 in 20-year convertible bonds for $598,700,000. Since the discount was small, the company is using the straight-line method to amortize the discount. Each $5,000 semi-annual bond pays a coupon rate of 8% interest and can be converted into 330 shares after the stock dividend. No bonds were converted during the year.

c. 2,000,000 shares cumulative preferred stock ($100 par) which pay a 9% dividend. Each share of preferred can be converted into 33 shares of common stock after the stock dividend.