CHAPTER 20:
THE DETERMINANTS OF DIVIDEND POLICY

20-1
a. True

b. True

c. False

20-2
Firms usually do not change their dividends very frequently. This is what is meant by sticky dividends. Part of the reason for sticky dividends is that firms are reluctant to cut dividends, because of the fear that markets will punish them. Consequently, they do not increase dividends unless they believe that they can maintain these higher dividends.

20-3
Cutting dividends may send a very negative signal to markets. When firms announce that they will be cutting dividends, markets assume the worst, i.e., that the firm is in serious financial trouble, and the company's stock price usually drops sharply.

a: It could increase more than a dime or less than a dime. It depends on the perception of the market on changes in future dividends.

b: Earnings can go up and down without theoretical boundaries while the dividends cannot go below zero.

20-4
If there are no tax differences in the treatment of dividends and capital gains, and firms can raise external financing at little or no cost, it can be argued that dividends are irrelevant. Large, financially strong firms with primarily tax-exempt or low-tax rate investors may fit this description best.

20-5
No. This tax disadvantage was particularly applicable in the United States prior to 1986 for high-tax rate individual investors. It does not apply to tax exempt investors or to corporations.

20-6

It should reduce the amount it pays in dividends. The problem it might run into is communicating this intent to the market. Since its existing stockholders like dividends, the announcement is likely to lead to some of them selling the stock, causing the stock price to drop.

20-7
An increase in dividends suggests to markets that the firm has the confidence that its future cash flows will be high enough to continue making these dividend payments. This confidence is the positive signal that might lead markets to increase their assessment of the firm's value. The empirical evidence is supportive, with stock prices increasing on dividend increases.

20-8
Yes. If a firm that is believed to have great projects/high growth prospects increases dividends, it may send the signal that its project choice is narrowing. There seems to be no empirical evidence to support this hypothesis, though.

20-9
(Price before - Price After) / Dividends = $(1 - t_o) / (1 -. t_{cg})$, i.e., $3.5/5 = (1- t_o)/(1 -.4)$
Solving for the ordinary tax rate, ordinary tax rate = $t_o = 1 - .6*3.5/5 = 58\%$

20-10
If the marginal investor (which is a corporation) sells the stock before the ex-dividend day,
$CF_B = P_B - (P_B - P)\ t_{cg}$
If the marginal investor sells the the stock after the ex-dividend day,
$CF_A = P_A - (P_A - P)\ t_{cg} + D\ (1 - 0.15\ t_o)$
If no arbitrage is allowed to occur,
$CF_B = CF_A$
Then we find $(P_B - P_A) / D = (1 - 0.15\ t_o) / (1 - t_{cg})$

20-11

Company	**Price change**	**Dividend**	**Price change/Dividend**
NE Gas	2	4	0.5
SE Bell	3	4	0.75
Western Elec.	5	5	1

As a tax-exempt investor, you make returns based upon the difference between the price drop and the dividend. Consequently, you will make excess returns on the first two stocks. On both an absolute and percentage basis, NE Gas is your best bet.

20-12
Assume that the true capital gains tax rate = Stated Rate/$(1+R_f)$n
$(P_b - P_a) = (1 - t_o) / (1- t_{cg})$ or $(\$10 - \$9.20) = (1-.5) / (1-.5/1.1n)$

Solving for n,   n = approximately 3 years

20-13
Tax rate on dividends = (40%) (.15) = 6%
Tax rate on capital gains = 28%
Expected price drop on ex-dividend day = ($0.50) (1-.06)/(1-.28) = $0.65

20-14
I would expect the price to drop since the actual price increase of 4% is less than the expected (or usual) price increase of 5%.

20-15
The stock price may react negatively. The dividend may signal that Microsoft's project choice is becoming less attractive, and this will have negative consequences for future growth and project returns. In addition, stockholders in Microsoft are likely to be oriented to capital gains and may not like the dividends.

20-16
I would expect the price reaction to be positive. The price increase in this case may send a positive signal to financial markets. The answer is different from the previous problem, because the auto parts industry is a more stable one than the software business (reducing the negative signaling implications of the dividend increase). Furthermore, the fact that the company already pays a substantial dividends implies that its stockholders will be less averse to receiving more in dividends.

20-17
The price reaction will be more muted. Since the 35 analysts following the firm are likely to dig up any positive information about the company, the dividend increase at the margin conveys less information than it would for a smaller firm.

20-18
I would expect it to decline. The preceding news on earnings and revenues has probably already conveyed the message that the firm is in financial trouble to financial markets. The decline in dividends, however, may cement this message by indicating that management believes that the earnings decline is not a short term phenomenon.

20-19
I would expect the stock price reaction to be positive. The fact that RJR Nabisco was under stockholder pressure to begin with suggests that their assets were making below-market returns. Selling such assets would therefore be a positive action; returning the cash to stockholders would add to this reaction because it eliminates the chance that this cash will be invested in other poor projects.

20-20
I would expect bond prices to drop. Selling assets (especially liquid ones) and paying dividends makes these bonds much riskier.

20-21
This incentive scheme would discourage the management from paying dividends because paying dividends would reduce the price of the stock and reduce the value of options to the managers.

20-22
Firms' dividend policy would be affected in different ways because the clientele of each firm may be in different tax bracket today.

20-23
The U.S. government may want to encourage capital formation in corporations.