Part III Equities

EQUITIES: ANALYSIS AND VALUATION

1. Answer is (d)

2. Since the historic P/E ratio is 10.0, the last dividend payment was 20p and the payout ratio is 40%, we can determine the current stock price:

$$P_0 = 20p\ (10)\ \{\frac{1}{0.40}\} = 500p$$

Using Gordon's Growth Model to determine the expected return on the stock:

$$R = \frac{D_1}{P_0} + G$$

$$R = \frac{20\ (1.12)}{500} + 0.12 = 16.48\%$$

The incremental return over the Risk-Free rate is therefore 8.48%

Answer = (d)

3. If last dividend was 30P and dividend payout ratio is 30%, most recent earnings were 100P.

Given a P/E ratio of 20 the current price is evidently 2000P.

We know expected return on equity from Gordon Model is sum of dividend yield in period 1 and growth rate.

$$R = \frac{30\ (1.12)}{2000} + 0.12 = 0.1368 \quad (\text{or } 13.68\%)$$

Hence the premium over the riskless rate of 6% is 7.68%.

Answer is (e)

4. Remember we have the usual dividend valuation model

$$P_0 = \frac{D_1}{1.14} + \frac{(D_2 + P_2)}{(1.14)^2}$$

$P_0 = 45$ $D_1 = 2.5(1.08) = 2.70$

$D_2 = 2.5(1.08)^2 = 2.916$

$$\frac{P_2}{(1.14)^2} = 45 - \frac{2.70}{(1.14)} - \frac{2.916}{(1.14)^2}$$

$$P_2 = 45(1.14)^2 - 2.70(1.14) - 2.916$$

$$= \underline{52.488}$$

We can check this by calculating

$$P_2 = \frac{D_3}{R-g} = \frac{2.5(1.08)^3}{0.14-0.08}$$

$$= \underline{52.488}$$

And rounded to the nearest quarter the share price will be $\underline{\$52.50}$

Answer = (d)

5.

$$\frac{P_0}{E_0} = 15$$

$D_1 = 10p$

$$\frac{D_1}{E_1} = 50\%$$

$E_1 = 20p$

$E_0 = 20p / 1.07 = 18.69p$

$P_0 = 15 \times 18.69 = 280.35p$

Formula for Gordon's growth model

$$P_0 = \frac{D_1}{R-G}$$

$$280.35 = \frac{10}{R-0.07}$$

R = 10.57%

Answer is (c)

6. Answer is (d)