

ANSWERS:

1. B
2. C
3. A
4. A
5. A
6. C
7. D
8. C
9. A
10. A
11. C
12. A
13. A
14. D
15. D
16. A

Calculation:

1.

amount you will receive	when you will receive it	present value of the amount
\$1	In 1 year	$1 / (1+0.05)=0.95$
\$1	In 2 years	$1 / (1+0.05)^2=0.90$
\$1	In 3 years	$1 / (1+0.05)^3=0.86$
\$1	In 4 years	$1 / (1+0.05)^4=0.82$
\$1	In 5 years	$1 / (1+0.05)^5=0.78$
\$65	In 5 years	$65 / (1+0.05)^5=50.93$
Total		\$ 55.24

Thus total present value \$ 55.24 is larger than current price \$ 55, it is undervalued, should invest in.

2. a. cost today is \$ 10 million

payoff after 4 years as in present value with different interest level:

11%	$15 / (1+0.11)^4 = 9.88$	net payoff = -0.12 million
10%	$15 / (1+0.10)^4 = 10.25$	net payoff = 0.25 million
9%	$15 / (1+0.09)^4 = 10.63$	net payoff = 0.63 million
8%	$15 / (1+0.08)^4 = 11.03$	net payoff = 1.03 million

Thus know they will not take project only when interest rate is 11%. In all three other cases they take the project.

b. the cutoff point is where net payoff = 0. we have

$$15 / (1 + x)^4 = 10 \quad \text{which leads to a } x = 10.67\%$$

Short answer:

1. Efficient market theory says that it should be very difficult to beat the market by finding undervalued stocks. The first condition is that lots of people are following the stock exchange closely, so that any new information will be quickly reflected in a change in the stock price. The

second condition is that supply and demand determine the price. Thus, the market will balance the number of people who think the stock is overvalued with those who think it is undervalued. Consequently, it should be difficult to consistently beat the market.

2. A risk-averse person can reduce risk by buying insurance, by diversifying her stock portfolio, and by holding a larger percentage of her assets as low risk and low return assets such as government securities.