1) Important implications of the efficient markets hypothesis include:

A) stock prices will respond to announcements only when the information in these announcements is new.
B) future changes in stock prices should, for all practical purposes, be unpredictable.
C) sometimes a stock price declines when good news is announced.
D) all of the above.
E) only A and B of the above.

2) Under a fixed exchange rate regime, if a central bank must intervene to purchase the domestic currency by selling foreign assets, then, like an open market sale, this action _____ the monetary base and the money supply, causing the interest rate on domestic deposits to _____.

A) increases; rise
B) increases; fall
C) reduces; fall
D) reduces; rise

3) Under the Bretton Woods system, when a country adopted an expansionary monetary policy, thereby causing a balance of payments _____, the country would eventually be forced to implement _____ monetary policy.

A) surplus; expansionary
B) deficit; contractionary
C) deficit; expansionary
D) surplus; contractionary

4) The bankruptcy of the Enron Corporation increased the spread between Baa and Aaa rated bonds. This is due to

A) a flight to liquidity.
B) a reduction in risk.
C) a flight to quality.
D) an increase in maturity
E) a reduction in maturity.
5) The U-shaped yield curve above indicates that short-term interest rates are expected to ____. 
A) fall moderately in the near-term and rise later on 
B) remain unchanged in the near-term and rise later on 
C) fall sharply in the near-term and rise later on 
D) rise in the near-term and fall later on 

6) International Monetary Fund 
A) is no longer an international lender. 
B) remains committed to maintaining a fixed exchange rate system. 
C) has been directly involved in helping those countries that have been experiencing difficulties repaying their loans to come to terms with lenders in the West. 
D) all of the above. 

7) A lower domestic money supply leads to a lower domestic price level in the long run, resulting in an expected ____ of the domestic currency that shifts the RF schedule to the _____. 
A) appreciation; left 
B) appreciation; right 
C) depreciation; right 
D) depreciation; left 

8) According to the liquidity premium theory of the term structure, a flat yield curve indicates that 
A) short-term interest rates are expected to rise in the future. 
B) short-term interest rates are expected to remain unchanged in the future. 
C) short-term interest rates are expected to decline moderately in the future. 
D) short-term interest rates are expected to decline sharply in the future.
9) In figure above, one factor that would not have caused the supply of bonds to increase is

A) expectations of more profitable investment opportunities.
B) a decrease in expected inflation.
C) an increase in government budget deficits.
D) a business cycle expansion.

10) Figure above illustrates the effect of an increased rate of money supply growth. From the figure, one can conclude that the

A) liquidity effect is smaller than the expected inflation effect and interest rates adjust slowly to changes in expected inflation.
B) liquidity effect is larger than the expected inflation effect and interest rates adjust slowly to changes in expected inflation.
C) liquidity effect is smaller than the expected inflation effect and interest rates adjust quickly to changes in expected inflation.
D) liquidity effect is larger than the expected inflation effect and interest rates adjust quickly to changes in expected inflation.
11) The interest rate on municipal bonds rises relative to the interest rate on Treasury securities when

A) corporate bonds become riskier.  
B) municipal bonds become more widely traded.  
C) income tax rates are raised.  
D) there is a major default in the corporate bond market.  
E) income tax rates are lowered.

12) In the foreign exchange market, if the exchange rate is expected to increase in the future, holding everything else constant,

A) the expected return on foreign deposits decreases.  
B) the expected return schedule for foreign deposits shifts to the left.  
C) the expected return schedule for foreign deposits shifts to the right.  
D) both A and B of the above occur.  
E) both A and C of the above occur.

13) When the growth rate of the money supply increases, interest rates end up being permanently higher if

A) the liquidity effect is larger than the other effects.  
B) there is fast adjustment of expected inflation.  
C) there is slow adjustment of expected inflation.  
D) the expected inflation effect is larger than the liquidity effect.

14) A _____ in \(i_D\) shifts the \(i_D\) schedule to the _____ and causes a depreciation of the foreign currency.

A) fall; left  
B) rise; right  
C) fall; right  
D) rise; left

15) Factors that can cause the supply curve for bonds to shift to the left include

A) a decrease in government deficits.  
B) an increase in expected inflation.  
C) an expansion in overall economic activity.  
D) all of the above.  
E) only A and B of the above.
16) Using the Gordon growth model, a stock's price will increase if

A) the growth rate of dividends falls.
B) the dividend growth rate increases.
C) the expected sales price rises.
D) dividends are reduced.
E) the required rate of return rises.

17) Under the current managed float exchange rate regime; countries with surpluses in their balance of payments frequently do not want to see their currencies appreciate because it makes their goods _____ expensive abroad and foreign goods _____ in their countries.

A) less; cheaper
B) more; costlier
C) more; cheaper
D) less; costlier

18) A rise in the domestic interest rate (iD) shifts the expected return on domestic deposits to the _____ and causes an appreciation of the _____ currency.

A) right; domestic
B) left; domestic
C) right; foreign
D) left; foreign

19) (Bonus question) Duration is a better measure of life of a bond than simple time to maturity because:

A) it allows to use one measure to evaluate the risk of an entire portfolio
B) it reflects the overall risk of an entity that issued the bond
C) it weights the cash flows by their timing and amount and thus it incorporates a measure of risk
D) all of the above
E) both A and C of the above.
21. Based on past data, the following table summarizes the stock returns with their probabilities.

<table>
<thead>
<tr>
<th>Stock</th>
<th>Return (state 1)</th>
<th>Return (state 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airbus</td>
<td>12% (prob = 0.5)</td>
<td>4% (prob = 0.5)</td>
</tr>
<tr>
<td>Boeing</td>
<td>-2% (prob = 0.5)</td>
<td>16% (prob = 0.5)</td>
</tr>
</tbody>
</table>

a) Calculate the expected returns on the two stocks. Then calculate the standard deviations of these returns. Based on your calculations which stock will you prefer? (5 points)

b) Assume that you can hold only these two stocks in your portfolio. Show how would you construct a risk free portfolio, i.e. what are the weights for these two stocks in your portfolio to achieve a risk free return. What is the risk free return? (7 points)
22. A stock is trading at $110 per share. The stock is expected to have a year-end dividend of $10 per share (D1=10), which is expected to grow at constant rate 5% throughout time. If you were an analyst who believes in efficient markets, what would be your estimate of the required rate of return? (6 points)
23. (a) Suppose that in March 2004 the yen/dollar exchange rate was 110 yen/$. After one year, in March 2005, the yen is trading at 104 yen/$. Did the dollar appreciate or depreciate against yen from March 2004 to March 2005? By how much? (Show your work) (5 points).

(b) Now suppose that the annual interest rate on dollar bank deposits in March 2004 was 7%. Further, in March 2004 it was expected that the future exchange rate in March 2005 would be 104 yen/$. If the interest rate parity condition holds, what was the implied interest rate on yen deposits? (Show your work) (5 points)
21. Based on past data, the following table summarizes the stock returns with their probabilities.

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a) Calculate the expected returns on the two stocks. Then calculate the standard deviations of these returns. Based on your calculations which stock will you prefer? (5 points)

**Answer:**

*Expected Return:*

\[
E(R)_{Airbus} = 12 \times 0.5 + 4 \times 0.5 = 8\% \\
E(R)_{Boeing} = -2 \times 0.5 + 16 \times 0.5 = 7\%
\]

*Variance:*

\[
\text{Var}(R)_{Airbus} = 0.5 \times (12-8)^2 + 0.5 \times (4-8)^2 = 16 \\
\text{Var}(R)_{Boeing} = 0.5 \times (-2-7)^2 + 0.5 \times (16-7)^2 = 81
\]

*Standard Deviation:*

\[
\text{SD}(R)_{Airbus} = \sqrt{16} = 4 \\
\text{SD}(R)_{Boeing} = \sqrt{81} = 9
\]

We prefer Airbus since it has higher expected return and lower risk.

a) Assume that you can hold only these two stocks in your portfolio. Show how would you construct a risk free portfolio, i.e. what are the weights for these two stocks in your portfolio to achieve risk free return. What is the risk free return? (7 points)

**Answer:**

Since the return on the portfolio must be the same in both states, we are solving the following equations:

\[
\begin{align*}
R &= \text{weight} \times R(\text{Airbus in state 1}) + (1-\text{weight}) \times R(\text{Boeing in state 1}) \\
R &= \text{weight} \times R(\text{Airbus in state 2}) + (1-\text{weight}) \times R(\text{Boeing in state 2})
\end{align*}
\]

\[
\begin{align*}
&= w \times 12\% + (1-w) \times (-2\%) = w \times 4\% + (1-w) \times 16\% \\
&= 14w - 2 = -12w + 16 \\
&\Rightarrow 26w = 18 \\
&\Rightarrow \text{weight} = 0.69 \approx 0.7
\end{align*}
\]

**Risk free return =** \[14\% \times 0.7 - 2\% = 7.8\%\]
22. A stock is trading at $110 per share. The stock is expected to have a year-end dividend of $10 per share (D₁=10), which is expected to grow at constant rate 5% throughout time. If you were an analyst who believes in efficient markets, what would be your estimate of the required rate of return? (6 points)

**Answer:** Use the generalized Dividend Valuation Model:

\[
P_0 = \frac{D_1}{k_e - g} \Rightarrow k_e - g = \frac{D_1}{P_0} \Rightarrow k_e = \frac{D_1}{P_0} + g = \frac{\$10}{\$110} + 5\% = 14\%
\]
Q19. (a) (5 points). Suppose that in March 2004 the yen/dollar exchange rate was 110 yen/$. After one year, in March 2005, the yen is trading at 104 yen/$. Did the dollar appreciate or depreciate against yen from March 2004 to March 2005? By how much? (Show your work)

(b) (5 points) Now suppose that the annual interest rate on dollar bank deposits in March 2004 was 7 %. Further, in March 2004 it was expected that the future exchange rate in March 2005 would be 104 yen/$. If the interest rate parity condition holds, what was the implied interest rate on yen deposits? (Show your work)

Answer
(a) Dollar’s depreciation against yen = (E2005 – E2004)/E2004 = (104-110)/110 = -0.055

=> dollar depreciated by 5.5%

(b) If the interest parity condition holds:

Yen deposit rate = Dollar deposit rate + dollar’s expected appreciation
Yen deposit rate = 0.07 + (104-110)/110 = 0.07 -0.055 = 0.015

Hence, the implied yen deposit rate is equal to 1.5%.