International Balance of Payments -- Homework 2

Name___________________________________

Part I
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Which one of the following statements is the most accurate?
   1) ________
      A) Since dollar and yen interest rates are not measured in comparable terms, they can move quite differently over time.
      B) Since dollar and yen interest rates are measured in comparable terms, they can move quite differently over time.
      C) Since dollar and yen interest rates are measured in comparable terms, they move quite the same over time.
      D) Since dollar and yen interest rates are measured in comparable terms, they still move quite differently over time.
      E) None of the above.

2) How many British pounds would it cost to buy a pair of American designer jeans costing $45 if the exchange rate is 2.00 dollars per British pound?
   2) ________
      A) 40 British pounds
      B) 32.5 British pounds
      C) 22.5 British pounds
      D) 12.5 British pounds
      E) 30 British pounds

3) How many dollars would it cost to buy an Edinburgh Woolen Mill sweater costing 50 British pounds if the exchange rate is 1.25 dollars per one British pound?
   3) ________
      A) 62.5 dollars
      B) 60 dollars
      C) 50 dollars
      D) 40 British pounds
      E) 70 dollars

4) The largest trading of foreign exchange occurs in
   4) ________
      A) New York
      B) London
      C) Frankfurt
      D) Singapore
      E) Tokyo
5) Which one of the following statements is the most accurate? Trades of U.S. dollars for Canadian dollars in New York are executed with

A) A three-day lag
B) A zero-day lag
C) A one-day lag
D) A two-day lag
E) A four-day lag

6) A foreign exchange swap

A) Is a spot sale of a currency combined with a forward sale of the currency
B) Is a forward repurchase of the currency
C) Is a spot sale of a currency
D) Is a spot sale of a currency combined with a forward repurchase of the currency
E) None of the above.

7) If the dollar interest rate is 10 percent, the euro interest rate is 6 percent, and the expected return on dollar depreciation against the euro is zero percent, then

A) An investor should invest only in euros.
B) An investor should be indifferent between dollars and euros.
C) An investor should invest only in dollars.
D) It is impossible to tell given the information.
E) All of the above.

8) In 2004,

A) 30 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
B) 10 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
C) 90 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
D) 20 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
E) 40 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
9) An appreciation of a country’s currency,
   A) Raises the relative price of its exports and lowers the relative price of its imports.
   B) Decreases the relative price of its exports and lowers the relative price of its imports.
   C) Lowers the relative price of its exports and raises the relative price of its imports.
   D) Raises the relative price of its exports and raises the relative price of its imports.
   E) None of the above.

10) If the goods’ money prices do not change, a depreciation of the dollar against the pound
    A) Makes British sweaters cheaper in terms of American jeans.
    B) Makes American jeans more expensive in terms of British sweaters.
    C) Doesn't change the relative price of sweaters and jeans.
    D) Makes British sweaters more expensive in terms of American jeans.
    E) None of the above.

11) By early 2004,
    A) The Canadian dollar was worth about 60 United States cents.
    B) The Canadian dollar was worth about 20 United States cents.
    C) The Canadian dollar was worth about 45 United States cents.
    D) The Canadian dollar was worth about 85 United States cents.
    E) The Canadian dollar was worth about 100 United States cents.

12) In 2004,
    A) 20 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
    B) 40 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
    C) 90 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
    D) 10 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.
    E) 30 percent of foreign exchange transactions involved exchanges of foreign currencies for U.S. dollars.

13) If the goods’ money prices do not change, an appreciation of the dollar against the pound
    A) Doesn't change the relative price of sweaters and jeans.
    B) Makes British sweaters more expensive in terms of American jeans.
    C) Makes British sweaters cheaper in terms of American jeans.
    D) Makes American jeans cheaper in terms of British sweaters.
    E) None of the above.
14) Which one of the following statements is the most accurate? Countries in the euro zone includes
   A) Austria, Belgium, Finland, France, Germany, Greece
   B) Austria, Belgium, Finland, France, Germany, Italy
   C) Austria, Belgium, Finland, France, Germany, Ireland
   D) Austria, Belgium, Finland, France, Germany
   E) All of the above statements are correct.

15) Which one of the following statements is the most accurate?
   A) A depreciation of a country's currency makes its goods cheaper for foreigners.
   B) A depreciation of a country's currency makes its goods cheaper for its own residents.
   C) A depreciation of a country's currency makes its goods cheaper.
   D) A depreciation of a country's currency makes its goods more expensive for foreigners.
   E) None of the above.

16) How many dollars would it cost to buy an Edinburgh Woolen Mill sweater costing 50 British pounds if the exchange rate is 1.80 dollars per one British pound?
   A) 40 dollars
   B) 50 dollars
   C) 90 dollars
   D) 95 dollars
   E) 100 dollars

17) An American put option on foreign exchange
   A) Gives the buyer the right to sell the foreign currency at a known exchange rate at a specific time in the future
   B) Gives the buyer the right to sell the foreign currency at a known exchange rate at any time during the period of the option
   C) Obligates the buyer to sell the foreign currency at a known exchange rate at any time during the period of the option
   D) Gives the seller the right to sell the foreign currency at a known exchange rate at any time during the period of the option
   E) None of the above.
18) Which one of the following statements is the most accurate?

A) Since dollar and Yen interest rates are measured in comparable terms, they move quite the same over time.
B) Since dollar and Yen interest rates are measured in comparable terms, they still move quite differently over time.
C) Since dollar and Yen interest rates are measured in comparable terms, they can move quite differently over time.
D) Since dollar and Yen interest rates are not measured in comparable terms, they can move quite differently over time.
E) None of the above.

19) In the beginning of 2006, you pay $100 for a share of stock that pays you a dividend of $1 at the beginning of 2007. If the stock price rises from $100 to $109 per share over the year:

A) Then you have earned a rate of 4 percent over 2006
B) Then you have earned a rate of 1 percent over 2006
C) Then you have earned a rate of 5 percent over 2006
D) Then you have earned a rate of 10 percent over 2006
E) Then you have earned a rate of 9 percent over 2006

20) When a country’s currency depreciates,

A) Foreigners find that its exports are more expensive, and domestic residents find that imports from abroad are more expensive.
B) Foreigners are not affected, but domestic residents find that imports from abroad are more expensive.
C) Foreigners find that its exports are cheaper; however, domestic residents are not affected.
D) Foreigners find that its exports are more expensive, and domestic residents find that imports from abroad are cheaper.
E) None of the above.

21) If the dollar interest rate is 10 percent and the euro interest rate is 6 percent, and the expected return on dollar depreciation against the euro is eight percent, then

A) An investor should invest only in euros.
B) An investor should invest only in dollars.
C) An investor should be indifferent between dollars and euros.
D) It is impossible to tell given the information.
E) All of the above.
22) An American call option on foreign exchange
   A) Obligates you to buy foreign currency at a known price at any time during the period of the option
   B) Gives you the right to sell foreign currency at a known price at any time during the period of the option
   C) Gives you the right to buy foreign currency at a known price at a specific day in the future
   D) Gives you the right to buy foreign currency at a known price at any time during the period of the option
   E) None of the above.

23) A sustained change in the monetary growth rate will,
   A) eventually affect equilibrium real money balances by raising the real interest rate.
   B) eventually affect equilibrium real money balances by raising the money interest rate.
   C) eventually affect equilibrium nominal money balances by raising the money interest rate.
   D) eventually affect equilibrium real money balances by reducing the money interest rate.
   E) immediately affect equilibrium real money balances by raising the money interest rate.

24) An individual’s need for liquidity would be down if:
   A) She took the train even though it was more expensive than the bus
   B) She got an ATM card
   C) She got a raise in salary
   D) She decided to spend less on small things on an average day
   E) She received check for her birthday

25) The long run effects of money supply change:
   A) proportional effect on the long–run values of the interest rate or real output, A proportional change in the money supply and price level’s long–run value in the same direction
   B) no effect on the long–run values of the interest rate or real output, no change in the money supply and price level’s long–run value
   C) ambiguous effect on the long–run values of the interest rate or real output, A disproportional change in the money supply and price level’s long–run value in the same direction
   D) no effect on the long–run values of the interest rate or real output, A proportional change in the money supply and price level’s long–run value in the same direction
   E) ambiguous effect on the long–run values of the interest rate or real output, A proportional change in the money supply and price level’s long–run value in the opposite direction
26) The aggregate demand for money can be expressed by:
A) \( M_d = R \times L(R, P) \)
B) \( M_d = P \times L(R, Y) \)
C) \( M_d = L \times P(R, Y) \)
D) \( M_d = R \times L(P, Y) \)
E) \( M_d = P \times Y(R, L) \)

27) For Germany, long-term changes in money supplies and price levels
A) show a clear positive correlation.
B) do not show a clear positive correlation.
C) do show a high and significant positive correlation.
D) do not show a clear negative correlation.
E) None of the above.

28) An economy's long-run equilibrium is
A) The equilibrium that would occur if prices were perfectly flexible and always adjusted immediately to preserve full employment.
B) The equilibrium that would occur if prices were perfectly flexible.
C) The equilibrium that would occur if prices were perfectly fixed at the full employment point.
D) The equilibrium that would occur if prices were perfectly fixed to preserve full employment.
E) The equilibrium that would occur if prices were perfectly flexible and always adjusted immediately.

29) Money serves as
A) A medium of exchange
B) A store of value
C) A unit of account
D) All of the above
E) Only A and B.

30) Which one of the following statements is the most accurate?
A) There is a lively academic debate over the possibility that seemingly sticky wages and prices are in reality quite flexible.
B) There is no debate over the possibility that wages and prices are sticky in the short run.
C) There is a lively academic debate over the possibility that seemingly sticky wages and prices are in reality much more sticky than theory assumes.
D) There is no debate over the possibility that wages and prices are sticky in the long run.
E) There is a lively academic debate over the possibility that seemingly sticky wages and prices are in reality quite fixed.
31) Using year-by-year data from 1989-2000 show that
   A) there is a strong positive relation between average Latin American money-supply growth and inflation.
   B) there is a weak positive relation between average Latin American money-supply growth and inflation.
   C) there is a strong positive relation between average Latin American money-supply growth and deflation.
   D) it is difficult to find a strong positive relation between average Latin American money-supply growth and inflation.
   E) there is a strong negative relation between average Latin American money-supply growth and inflation.

32) Money demand behavior may
   A) change only as a result of demographic trends.
   B) change as a result of demographic trends or financial innovations such as electronic cash-transfer facilities.
   C) change as a result of demographic trends but not as a result of financial innovations such as electronic cash-transfer facilities.
   D) change only as a result of financial innovations such as electronic cash-transfer facilities.
   E) not change as a result of demographic trends or financial innovations such as electronic cash-transfer facilities.

33) During hyperinflation, exploding inflation causes real money demand to
   A) fall over time, and this additional monetary change makes money prices decrease even more quickly than the money supply itself rises.
   B) increase over time, and this additional monetary change makes money prices decrease even more quickly than the money supply itself rises.
   C) fall over time, and this additional monetary change makes money prices decrease even less quickly than the money supply itself rises.
   D) increase over time, and this additional monetary change makes money prices rise even more quickly than the money supply itself rises.
   E) fall over time, and this additional monetary change makes money prices rise even more quickly than the money supply itself rises.
34) Which of the following statements is true about a vehicle currency?
   A) The pound sterling, once second only to the dollar as a key international currency, is
      beginning to rise in importance.
   B) There is much skepticism that the euro will ever evolve into a vehicle currency on par with
      the dollar.
   C) The dollar is sometimes called a vehicle currency because of its pivotal role in many foreign
      exchange deals.
   D) It is widely used to denominate contracts made by parties who reside in the country that
      issues the vehicle currency.
   E) Only A and C.

35) Exxon Mobil want to pay €160,000 to a German supplier. They get an exchange rate quotation
    from its own commercial bank and instructs it to debit their dollar account and pay €160,000 to the
    supplier's German account. If the exchange rate quoted is $1.2 per euro, how much is debited to
    Exxon Mobil's account?
    A) $160,000
    B) $172,000
    C) $180,000
    D) $192,000
    E) None of the above.

36) How many British pounds would it cost to buy a pair of American designer jeans costing $45 if the
    exchange rate is 1.80 dollars per British pound?
    A) 20 British pounds
    B) 40 British pounds
    C) 10 British pounds
    D) 25 British pounds
    E) 30 British pounds

37) How many British pounds would it cost to buy a pair of American designer jeans costing $45 if the
    exchange rate is 1.60 dollars per British pound?
    A) 38.125 British pounds
    B) 18.125 British pounds
    C) 58.125 British pounds
    D) 48.125 British pounds
    E) 28.125 British pounds
38) What accounts for most of the activity in the foreign exchange market?
   A) Sale of good and services
   B) Foreign imports
   C) Government transfers
   D) Government purchase of assets
   E) Inter-bank trading

39) Which one of the following statements is the most accurate? The term spot exchange rate is
   A) Misleading because even spot exchanges usually become effective only six days after a deal is struck
   B) Misleading because even spot exchanges usually become effective only five days after a deal is struck
   C) Misleading because even spot exchanges usually become effective only three days after a deal is struck
   D) Misleading because even spot exchanges usually become effective only four days after a deal is struck
   E) Misleading because even spot exchanges usually become effective only two days after a deal is struck

40) Which one of the following statements is the most accurate?
   A) Given $P_{US}$ and $Y_{US}$, when the money supply rises, the dollar interest rate declines and the dollar appreciates against the euro.
   B) Given $Y_{US}$, when the money supply rises, the dollar interest rate declines and the dollar depreciates against the euro.
   C) Given $P_{US}$ and $Y_{US}$, when the money supply rises, the dollar interest rate declines and the dollar depreciates against the euro.
   D) Given $P_{US}$, when the money supply rises, the dollar interest rate declines and the dollar depreciates against the euro.
   E) Given $P_{US}$ and $Y_{US}$, when the money supply decreases, the dollar interest rate declines and the dollar depreciates against the euro.

41) The exchange rate between currencies depends on
   A) The expected future exchange rate
   B) The interest rate that can be earned on deposits of those currencies and the expected future exchange rate
   C) The interest rate that can be earned on deposits of those currencies
   D) National output
   E) None of the above.
42) An increase in a country's money supply causes

A) its currency to appreciate in the foreign exchange market while a reduction in the money supply causes its currency to depreciate.
B) its currency to depreciate in the foreign exchange market while a reduction in the money supply causes its currency to appreciate.
C) its currency to depreciate in the foreign exchange market while a reduction in the money supply causes its currency to further depreciate.
D) no effect on the values of its currency in international markets.
E) None of the above.

43) By late 2004,

A) A Canadian dollar was worth only about 20 United States cents.
B) A Canadian dollar was worth only about 80 United States cents.
C) A Canadian dollar was worth only about 100 United States cents.
D) A Canadian dollar was worth only about 65 United States cents.
E) A Canadian dollar was worth only about 15 United States cents.

44) An increase in

A) real output raises the interest rate while a fall in real output lowers the interest rate, given the money supply.
B) nominal output raises the interest rate while a fall in real output lowers the interest rate, given the price level and the money supply.
C) real output decreases the interest rate while a fall in real output increases the interest rate, given the price level.
D) nominal output raises the interest rate while a fall in real output lowers the interest rate, given the price level.
E) real output raises the interest rate while a fall in real output lowers the interest rate, given the price level and the money supply.

45) Suppose that the one-year forward price of euros in terms of dollars is equal to $1.113 per euro. Further, assume that the spot exchange rate is $1.05 per euro, and the interest rate on dollar deposits is 10 percent and on euro it is 4 percent. Under these assumptions,

A) Covered interest parity does not hold.
B) Covered interest parity does hold.
C) It is hard to tell whether covered interest parity does or does not hold.
D) Not enough information is given to answer the question.
E) None of the above.
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

46) For the table above (or below) calculate the EXACT relationship.

<table>
<thead>
<tr>
<th>Case</th>
<th>R$</th>
<th>RE</th>
<th>E</th>
<th>Rate of Return Difference Between Dollar and Euro Deposits</th>
<th>Exact Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.1</td>
<td>0.06</td>
<td>0</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.1</td>
<td>0.06</td>
<td>0.04</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.1</td>
<td>0.06</td>
<td>0.08</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.1</td>
<td>0.12</td>
<td>-0.04</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.1</td>
<td>0.18</td>
<td>0</td>
<td>-0.08</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.15</td>
<td>0.06</td>
<td>0</td>
<td>0.09</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.15</td>
<td>0.06</td>
<td>0.04</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.15</td>
<td>0.06</td>
<td>0.08</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.15</td>
<td>0.12</td>
<td>-0.04</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.15</td>
<td>0.18</td>
<td>0</td>
<td>-0.03</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.2</td>
<td>0.06</td>
<td>0</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.2</td>
<td>0.06</td>
<td>0.04</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.2</td>
<td>0.06</td>
<td>0.08</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.2</td>
<td>0.12</td>
<td>-0.04</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.2</td>
<td>0.18</td>
<td>0</td>
<td>0.02</td>
<td></td>
</tr>
</tbody>
</table>

47) For the data in the previous question, plot today’s dollar/euro exchange rate against the expected dollar return on euro deposits.

48) Compute how many dollars would it cost to buy an Edinburgh Woolen Mill sweater costing 50 British pounds for the following exchange rates?

<table>
<thead>
<tr>
<th>Exchange Rate Number of Dollars per One British Pound</th>
<th>Price of a Sweater in British Pounds</th>
<th>Price in Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.25</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1.9</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>
49) Calculate the interest rate in the euro zone if interest parity condition holds, for the following 15 cases:

<table>
<thead>
<tr>
<th>Case</th>
<th>R_E</th>
<th>E</th>
<th>R$_$$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.04</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.08</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>-0.04</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.04</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.08</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>-0.04</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.04</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.08</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>-0.04</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>0.2</td>
<td></td>
</tr>
</tbody>
</table>

50) Find the exchange rate between the dollar and the British pounds for the following cases:

<table>
<thead>
<tr>
<th>Price of a pair of American Designer Jeans</th>
<th>Price in British Pounds</th>
<th>Exchange Rate Number of Dollars per one British Pound</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>140</td>
<td></td>
</tr>
</tbody>
</table>
51) Compute how many British pounds would it cost to buy a pair of American designer jeans costing $45?

<table>
<thead>
<tr>
<th>Exchange Rate Number of Dollars per One British Pound</th>
<th>Price of a Pair of American Designer Jeans</th>
<th>Price in British Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.25</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.75</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>1.9</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

52) Determine for each, whether the interest parity condition holds or not, if $E_{}\$/£ = 1.10

<table>
<thead>
<tr>
<th>Interest Rate for the Dollar</th>
<th>Interest Rate for the Euro</th>
<th>Exchange Rate $E_{}$/£</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04</td>
<td>0</td>
<td>1.037</td>
</tr>
<tr>
<td>0.07</td>
<td>0.02</td>
<td>0.99</td>
</tr>
<tr>
<td>0.08</td>
<td>0.08</td>
<td>0.948</td>
</tr>
<tr>
<td>0.09</td>
<td>0.04</td>
<td>1.047</td>
</tr>
<tr>
<td>0.2</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>0.1</td>
<td>0</td>
<td>0.99</td>
</tr>
<tr>
<td>0.12</td>
<td>0.04</td>
<td>0.948</td>
</tr>
</tbody>
</table>
53) Explain the following figure

![Diagram of the U.S. and European money markets and foreign exchange market]

54) Using a figure describing both the U.S. money market and the foreign exchange market, analyze the effects of a temporary increase in the European money supply on the dollar/euro exchange rate.

55) Using 4 different figures, plot the time paths showing the effects of a permanent increase in the United States money supply on:
   (a) U.S. Money supply
   (b) The dollar interest rate.
   (c) The U.S. price level
   (d) The dollar/euro exchange rate

56) Using a figure describing both the U.S. money market and the foreign exchange market, analyze the effects of an increase in the U.S. money supply on the dollar/euro exchange rate.
57) Calculate the interest rate in the United States, if interest parity condition holds, for the following 15 cases:

<table>
<thead>
<tr>
<th>Case</th>
<th>$R_E$</th>
<th>$E$</th>
<th>$R_S$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

58) For the following 15 cases, compare the dollar rates of return on dollar and euro deposits:

<table>
<thead>
<tr>
<th>Case</th>
<th>Dollar Interest Rate, $R_S$</th>
<th>Euro Interest Rate, $R_E$</th>
<th>Expected Rate of Dollar Depreciation Against Euro</th>
<th>Rate of Return Difference Between Dollar and Euro Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.1</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.1</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.1</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.1</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.1</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.15</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.15</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.15</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>0.15</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.15</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>0.2</td>
<td>0.06</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.2</td>
<td>0.06</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>0.2</td>
<td>0.06</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.2</td>
<td>0.12</td>
<td>-0.04</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>0.2</td>
<td>0.18</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

59) Using figures for both the short run and the long run, show the effects of a permanent increase in the U.S. money supply. Try to line up your figures to the short and long run equilibria side by side. Assume that the U.S. real national income is constant.

60) Assume the U.S. interest rate is 10 percent, and the interest rate on euro deposits is 5 percent. For the following exchange rates, find the forward exchange rates.

<table>
<thead>
<tr>
<th>Today’s Dollar/Euro Exchange Rate $E$/E</th>
<th>Forward Exchange Rate $F$/E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>1.05</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td></td>
</tr>
</tbody>
</table>
Part II: The Current Account and Government Finance

Consider the following two period model of a small open economy without production or investment. There is only one good in each period, which cannot be stored. The economy has a representative household that is endowed with \( Q_1 = 10 \) units of the good in period 1 and \( Q_2 = 10 \) units in period 2. The world interest rate is constant and equal to \( r^* = 0.1 \) (i.e. ten percent) per period. The typical household has zero initial net foreign wealth.

The preferences of the representative household are described by the utility function:

\[
U(C_1, C_2) = \sqrt{C_1} + \beta \sqrt{C_2}
\]

where \( \beta = 1/1.1 \).

Assume that there is a government that consumes \( G_t \) units of goods in period \( t = 1, 2 \). To finance its expenditure, the government collects lump sum taxes \( T_1 \) and \( T_2 \) in periods 1 and 2 from the representative household. In addition, the government can borrow and lend in the international market at the interest rate \( r^* \). Finally, assume that the government has zero initial net foreign wealth.

1. Assume that \( G_t = T_t = 1, \ t = 1, 2 \). Note, in particular, that the government budget is balanced. Compute the equilibrium levels of consumption, the trade balance, and the current account in periods 1 and 2.

2. Now suppose that taxes are zero in period 1. Then the government must borrow \( B^g_1 = G_1 = 1 \) in period 1 and, as a consequence, \( T_2 = (1 + r^*) \) (justify this!) How does your answer to the preceding question change? To see what is going on, compute private, public, and national savings in both situations.

3. (Optional) More generally, show that equilibrium consumption depends only on the present value of government expenditure, and not on the timing of taxes. (Hint: For any given \( G_1, G_2, T_1, \) and \( T_2 \), write down the household’s present value budget constraint and the condition for optimal consumption. Then write down the government budget constraint, also in present value terms. Finally, combine the two budget constraints. Discuss.)

4. Suppose now that \( G_1 = T_1 = 2, \) while \( G_2 = T_2 = 1 \). How does the current account in period 1 change relative to your answer to question 1?

5. Finally, suppose that \( G_t = T_t = 2, \) both \( t = 1, 2 \). Discuss the current account in period 1, comparing your result with that of the previous question.