1. We know that the value of the funds in your checking account is money: a check is a generally accepted means of payment. But is the check itself money? Why or why not?

The check itself is simply an instruction for an exchange of funds, and is not itself money. The primary reason is that a check is usually accepted only once in payment; it then clears through the banking system, funds are transferred from the buyer’s bank to the seller’s bank, then the check is returned to the buyer. In principle, a check could be money if the seller was able to use the buyer’s check in another transaction, and so on. But this almost never happens.

2. Define:
   a) The problem of (double) coincidence of wants – the costs of trying to find someone who wants what you have and have what you want; particularly problematic in a barter system. The existence of money solves this problem.
   b) Fiat money – money for which the exchange value far exceeds its inherent value; usually issued by the government.
   c) The monetary base – the monetary liabilities of the Fed; the sum of federal reserve notes outstanding and reserve deposits held by banks.
   d) M1 – the sum of currency held by the non-bank public and checking account balances
   e) Federal Reserve Note – paper currency issued by the Federal Reserve System

3. True or false: “Governments are necessary for the establishment of money.”

False. Commodity monies have evolved naturally, absent government intervention, as a way to reduce transactions costs. The transition from a commodity to a fiat money almost always involves government.

4. Suppose that there is no currency. The Fed holds $800 of t-bills as assets, and issues $800 in total reserves to banks. The banking system holds $9200 worth of loans and t-bills and has $10,000 in checking account liabilities. Finally, the required reserve ratio is 10%.
   a) What is the quantity of money and the monetary base in this economy, according to this balance sheet information? $M1 = 10,000; MB = 800$.
   b) Suppose that on average, the banking system desires to hold 10% of its checking account liabilities as liquid reserves. If the Fed does not alter the monetary base, what will happen to the quantity of money in this example, and how? $Deposits will fall to$8000, since this is all $800 of reserves can support.
c) What might the Fed do, in terms of open market operations, if it does not want the
money supply to change in this case?
It could buy $200 in t-bills from the banking system, increasing reserves and the
monetary base to $1000.

5. In terms of the effect on the monetary base, does it matter if the FOMC buys treasury
securities from a bank or an individual? Suppose the FOMC buys stock in Microsoft,
instead of government bonds. Will this have a different effect on the monetary base
compared to a purchase of government securities?

It makes no difference from or to whom the Fed buys or sells securities. If from an
individual, banks will still get additional reserves when the seller deposits the check
from the Fed. It also does not matter what the Fed buys, since it still pays by issuing
base money.

6. Compute the velocity (V) of M1 for the first three quarters of 2001. Relevant data can
be found at the following web sites:


<table>
<thead>
<tr>
<th>Year</th>
<th>GDP deflator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001:I</td>
<td>9.18</td>
</tr>
<tr>
<td>2001:II</td>
<td>9.12</td>
</tr>
<tr>
<td>2001:III</td>
<td>8.89</td>
</tr>
</tbody>
</table>

7. Work textbook question 8, parts (a), (c) and (d), Chapter 9, p. 203.

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP deflator</th>
<th>inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1.016</td>
<td>--</td>
</tr>
<tr>
<td>1998</td>
<td>1.029</td>
<td>1.28%</td>
</tr>
<tr>
<td>1999</td>
<td>1.044</td>
<td>1.46%</td>
</tr>
</tbody>
</table>