7.013 Section Self-quiz

1) Label the parts of the cell below.

<table>
<thead>
<tr>
<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
<th>e.</th>
<th>f.</th>
<th>g.</th>
<th>h.</th>
<th>i.</th>
</tr>
</thead>
<tbody>
<tr>
<td>nucleus</td>
<td>plasma membrane</td>
<td>rough endoplasmic reticulum (RER)</td>
<td>smooth ER</td>
<td>lysosome</td>
<td>nucleolus</td>
<td>ribosomes on rough ER</td>
<td>mitochondrion</td>
<td>Golgi apparatus</td>
</tr>
</tbody>
</table>

2) Describe briefly how each labeled answer functions.

3 a) Label the parts of the eukaryotic cell on the diagram below using the following list.

<table>
<thead>
<tr>
<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
<th>e.</th>
<th>f.</th>
<th>g.</th>
<th>h.</th>
<th>i.</th>
</tr>
</thead>
<tbody>
<tr>
<td>nucleus</td>
<td>cytoplasm</td>
<td>rough endoplasmic reticulum</td>
<td>plasma membrane</td>
<td>free ribosomes</td>
<td>ribosomes on rough endoplasmic reticulum</td>
<td>smooth endoplasmic reticulum</td>
<td>mitochondrion</td>
<td>golgi apparatus</td>
</tr>
</tbody>
</table>

7.013 Spring 2006  Section 1
3 b) How do prokaryotic cells differ from eukaryotic cells? (Note the prokaryotic cell is much much smaller than the eukaryotic cell but they are both drawn so that you can see and compare interanal components.)

![Skin Cell and Bacterium Diagram]

4) Currently, scientists estimate that life first appeared on approximately _____________ years ago.

5) A key point in the theory of evolution is: slight variations among individuals significantly affect the chance that a given individual will survive in its environment and reproduce.

These variations among individuals are due to ____________ .

6) The human body has ___________ cells.

7) The building blocks of DNA are __________.

8) The building blocks of proteins are __________.

9) All cells have a membrane composed of ________________.

10) In the process of glycolysis, cells make energy in the form of ________________.

11) Oxidation and ________________ occur together.

12) What is a gene?

13) The "Central Dogma" states that information flow in the cell is from DNA to __________ to __________ .

14) Are the genes in your eye cells the same or different than the genes in your gut cells?

15) Are the proteins in your eye cells the same or different than the proteins in your gut cells?