1. (2 points) The text describes two aspects of “the problem” of building and delivering software systems on time. What are these two aspects? (You don’t need to describe them, just name them.)

2. (4 points) Discuss the knowledge acquisition activity.

3. (1 point) Give an example of a synchronous communication mechanism.

4. (2 points) Consider an ATM banking system. Is the following a functional or nonfunctional requirement? “It shall not matter if the account holder inserts their card with the magnetic stripe facing left or right or up or down; the card shall be successfully read in any case.”

5. (4 points) Two representations of the dynamic, also behavioral, system model are statechart diagrams and sequence diagrams, but they describe different perspectives. The statechart describes the behaviors across all functionalities that are relevant for a single object in a system. What is the perspective of the sequence diagram?

6. (9 points) Match each of the software engineering activities listed in the left column below with the phase listed in the right column in which the activity is performed. (Each item in the left column matches exactly one item in the right column. Each item in the right column matches 0 or more items in the left column.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying boundary objects</td>
<td>Requirements elicitation</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

7. (3 points) What does it mean for a requirements specification document to be consistent?

8. (4 points) What is the best relationship between the classes County and State?

9. (8 points) Consider the following ATM use case diagram. How would you suggest enhancing the functional model to reflect _____________. If you think the diagram should change, go ahead and make the changes here. If you think the diagram remains okay, the describe how this situation is added to the model.

10. (13 points) Develop a statechart for ______________________________.

11. (13 points) Develop a class diagram for ______________________________.