1. (a) What are the three types of classes in the Analysis model? Show their UML notation.

(b) What is the disadvantage of picking nouns and verbs from a problem statement to identify classes?

2. Explain the following:

(a) Velocity

(b) Spiking

(c) Timeboxing

(d) Micro Development

(e) Macro Development

3. What is a Mock Object? When and why would you use it?
4. Mention five benefits of Test Driven Development/Test First Coding (list in bullets instead of writing paragraph):

__________________________________________________________________
__________________________________________________________________
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5. (a) What is wrong with copy constructor provided by default in C++?

(b) What is wrong with clone facility provided in Java/.NET?

(c) How do you recommend I approach the problem of copying an object?

6. What is the UML notation for each of the following (draw as few diagrams as possible):
   (a) Package
   (b) Static attribute
   (c) Public method
   (d) Protected method
   (e) Derived attribute
7. Let’s say I have a class A with some functions. I need a class B with similar functions (may be slightly different, mostly same) as in A and may be some added functions.
   (a) Explain reasons why I would consider inheriting B from A.

   (b) Explain reasons why I would consider aggregating A within B instead of inheriting from A.

8. What is the propose of use case model? What are the different artifacts in a use case model?

9. What are the similarities and differences between association, aggregation and composition? Show the UML notation for these.
10. My application is expected to work on different versions of the operating system. A code change I make is not compatible with one of the versions and I don’t know this. A tester may take a week or more to test my code on that version of OS. Is it good for me to wait for the code to be tested on that platform a week or more after I check in the change? What can I do about that? Explain in detail, giving me as much pointers as you can so I can investigate this further.