1. Briefly describe in your own words the difference between an “r-value”, an “l-value”, and “aliases” as discussed in the textbook.

2. In your own words describe the difference between static and dynamic variable bindings. Give an example of each within C++.

3. In your own words explain the difference between explicit and implicit type declarations.

4. In your own words explain the difference between static and dynamic type bindings. According to the book, what is the major disadvantage of languages that use dynamic type bindings?

5. Create a 2x2 matrix comparing languages according to whether they use static-vs-dynamic type bindings and explicit-vs-implicit type declarations. The cells of your matrix should contain a programming language that uses the specific binding and declaration (for each of the four possible combinations). Note that you may not be able to find a language for one of the combinations.

6. Briefly summarize the differences among static variables, stack-dynamic variables, and (explicit) heap-dynamic variables in terms of how variables are bound to memory. Give a concrete example (i.e., fragments of code) in a language of your choice that demonstrate each of these.

7. Provide a one-sentence definition in your own words of the following terms: variable scope, variable visibility, local variable, code block, static scoping, global scoping, and dynamic scoping.