1. (1pt) **Name:** _____

INSTRUCTIONS: Carefully read each question, and write the answer in the space provided. If answers to free response questions are written obscurely, zero credit will be awarded. The correct answer to a free response question with a short answer (i.e., one word or phrase) will never contain any significant words used in the question itself (i.e., "crossword rules"). You are permitted to use any **hand-written** notes (including "hand-written" on e.g., a tablet, as long as you did the writing) from our last class; all other aids (other than your brain) are forbidden. Questions may be brought to the instructor.

For **TRUE** or **FALSE** and multiple choice questions, circle your answer.

To get credit for this question, you must:

- Print your name (e.g., "Martin Kellogg") in the space provided on this page.
- Print your UCID (e.g., "mjk76") in the space at the top of **each** page of the exam.

Contents (blanks for graders only):

Writing your UCID on every page:	1 / 1
I. Very Short Answer:	4 / 4
II. Short Answer:	5 / 5
III. Extra Credit:	1 / 0
Total:	11 / 10

I. Multiple Choice and Very Short Answer (4pts). In the following section, either circle your answer (possible answers appear in **bold**) or write a very short (one word or one phrase) answer in the space provided.

2. (1pt) **TRUE** or **FALSE**: Cool class definitions must correspond 1 to 1 with .cl source files.

3. (1pt) Which of the following arithmetic operators is **not** present in Cool?

A $<$
B $+$
C $=$
D $>$

4. (1pt) Which of the following is **not** a built-in class in Cool?

A IO
B String
C Array
D Bool

5. (1pt) **TRUE** or **FALSE**: identifiers in Cool are case-sensitive.

II. Short answer (5pts). Answer the questions in this section in the space provided.

6. (5pt) Write a Cool program that prints each number from 1 to 10 on a new line. Instead of the number "7", print the word "Foozle".

```
class Main inherits IO {
  main() : Object {
    let x : Int in
      {
        x <- 1;
        while (x < 11) loop
          {
            if (x = 7) then out_string("Foozle\n")
            else { out_int(x) ; out_string("\n"); } fi ;
            x <- x + 1 ;
          } pool;
      }
  };
};
```

III. Extra Credit. Questions in this section do not count towards the denominator of the exam score.

7. (1pt) Name a programming language paradigm other than "imperative", "structured", "functional", or "object-oriented". Then, give an example of a language that supports that paradigm. **I would write "declarative Prolog", but any answer that is substantative enough that I think a Wikipedia editor would accept the evidence gets credit**