Math 201 - Test 3a

Name _____

April 28, 2011

Score _____

Circle the best answer for each problem. Each problem is worth one (1) point.

1. Which one of the following is used to declare an input file stream object?

    (a) `ofstream`

    (b) `ifstream`

    (c) `istream`

    (d) `instream`

2. Suppose a function has a formal argument x of type `double`. If x is to be passed by reference, which one of the following is the correct syntax for including x in the function header?

    (a) `double x`

    (b) `double *x`

    (c) `double ~x`

    (d) `double &x`

3. Suppose the 2-D array x is declared and initialized as follows:

    `float x[3][2] = { 6.3, 7.1, -8, 5.7, 3.14 };`

    Which one of the following is true?

    (a) `x[3][2] = 0.0`

    (b) `x[2][1] = -8.0`

    (c) `x[1][1] = 5.7`

    (d) `x[2][1]` is not defined

4. True or False: When passing arrays as function arguments, arrays are automatically passed by reference.

    (a) True

    (b) False

    (c) 2.71828

    (d) None of the above

5. A string is a one-dimensional array of type `char` that is terminated by what character?

    (a) `'\n'`

    (b) `'\t'`

    (c) `'\a'`

    (d) `'\0'`

6. Which one of the following statements about closing files is FALSE?

   (a) The output file stream object `my_file` can be closed by using `my_file.close()`.

   (b) Open files are closed automatically at program termination.

   (c) When an output stream object goes out of scope, the file is automatically closed.

   (d) A program cannot successfully terminate unless all files have been explicitly closed.

7. True or False: In the body of a function that has been passed a function `f` as an argument, `f` must be dereferenced by using `(*f)` each time it is called.

   (a) True

   (b) False

   (c) Tuesday

   (d) $x = 13.9$

8. If we want the actual arguments of a function to be manipulated, the arguments must be passed by _____.

   (a) reference

   (b) value

   (c) instantiation

   (d) characterization

9. Suppose the function `f` takes a double and returns a float. Which one of the following is the correct header for a function that has `f` as a argument?

   (a) `double func( float (*f)( double x ), float a, float b );`

   (b) `double func( float f( double x ), float a, float b );`

   (c) `double func( float (&f)( double x ), float a, float b );`

   (d) `double func( double (*f)( float x ), float a, float b );`

10. The string `Hello world` is to be stored in a character array. What size character array is required?

    (a) 10 or smaller

    (b) 11

    (c) 12 or bigger

    (d) None of the above

11. Is it possible for a constant to be passed by reference?

    (a) Yes.
    (b) No.
    (c) It depends on the context.
    (d) Only on Fridays.

12. When referencing an element of a one-dimensional array, `*(&a[0]+i)` means the same as _____.

    (a) `a[i]`
    (b) `a[0]`
    (c) `a`
    (d) None of the above

13. An array is declared as follows. How many elements does it have?

    ```
    int x[6][3][4];
    ```

    (a) 13
    (b) 30
    (c) 72
    (d) 140

14. Which one of the following could be used to test for end-of-file from keyboard input?

    (a) `eof.cin()`
    (b) `input.eof()`
    (c) `cout.eof()`
    (d) `cin.eof()`

15. How do we pass an array as a function argument?

    (a) We pass the base element.
    (b) We pass the address of the base element.
    (c) We pass the address of the last element.
    (d) We pass the last element.