CSC 461 Programming Languages

FALL 2024

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Ass #5 - 10 points Due: Wednesday Nov. 20th 11:59 PM

Please complete/answer the following questions and record using the Online Quiz Format.

Each question 1 pt.

1) In imperative languages the associativity of operators that are at the same level of precedence can be _____
    a. top to bottom
    b. confusing because most languages don't enforce it
    c. ignored because it does not play a part in the evaluation of the expression
    d. either right-to-left or left-to-right

2) Functional side effects cannot occur when _____
    a. No parameters are passed
    b. If only 1 parameter is passed
    c. There are no logical error in the function (it works correctly)
    d. Only constants are involved

3) The expression: x = foo(x) – foo(x) may or may not bring up issues of referential transparency depending on _____
    a. If the right-hand side of the expression evaluates to a negative number
    b. If foo can have side effects on x
    c. If x is of type integer
    d. Foo does I/O

4) Widening conversions are generally thought of as safe but even in languages that allow widening conversions such as assigning an integer to a float, there can still be an issue with _____
    a. Precision
    b. Scoping
    c. Name Binding
    d. Sequential flow of control

5) Allowing or not allowing coercion of mixed-mode expressions brings up an issue with who should be responsible for dealing with such errors. Who are the two possible choices?
    a. Programmer or End-User
    b. Stack or heap
    c. Programmer or Compiler
    d. Readability or writability

6) When short-circuiting is used in the evaluation of an expression an issue may arise if the whole expression is not evaluated if _____ is present in the expression.
    a. A side-effect
    b. A multiplication
    c. A parenthesis pair
    d. Type cast

7) The semantics of an expression is determined in a large part by _____
    a. The order of evaluation of operators
    b. The storage binding
    c. If it is in a block
    d. Writability

8) The inclusion of the optional “else” with the “if” statement helps the user with reliability by enforcing _____
    a. The order of precedence
    b. Type checking
    c. Mutual exclusion
    d. Short-circuiting

9) It is provable that if a language has a top-tested conditional (logical) control loop then a fixed (counter-controlled) loop is not needed. Why then is it often included as an addition iteration control structure?
    a. To help with scoping
    b. To allow unconditional branching
    c. To allow for blocks
    d. To help with Readability/Writability/Reliability

10) The GOTO statement is the most powerful statement for controlling the flow of execution of a program. Nevertheless, even if included in a language, its use is discouraged because it violated what major design criteria for a language?
    a. Readability
    b. Writability
    c. Efficiency
    d. Portability