

- #1 A nameless function is known as
- (a) an abstract function.
 - (b) a first-order function.
 - (c) a prototype function.
 - (d) a zero-order function.
 - (e) a lambda function.
- #2 A function that can take a function as an argument and/or return a function as its result is known as
- (a) a first-class function.
 - (b) a higher-order function.
 - (c) a generator function.
 - (d) an abstract function.
 - (e) a composite function.
- #3 Iteration is implemented in a functional language via
- (a) iteration.
 - (b) repetition.
 - (c) composition.
 - (d) recursion or iteration, as appropriate.
 - (e) recursion.
- #4 If a function always returns the same value, given the same parameters (and has no side effects), it is said to be
- (a) coherent.
 - (b) first-order.
 - (c) fundamental.
 - (d) referentially transparent.
 - (e) concise.
- #5 The EVAL function, by itself, serves as
- (a) a standardizing force in the functional programming world.
 - (b) evidence that a compiler is superfluous to functional languages.
 - (c) a LISP interpreter.
 - (d) a means of defining anonymous functions.
 - (e) the primary means of executing iterative algorithms.

Enter the letter(s) of each answer below. You may choose multiple answers, but credit will be divided by the number of choices made.

1 E 2 B 3 E 4 D 5 C 6 D 7 B 8 A 9 D 10 D

- #6 If a language treats functions the same way it treats data, then functions are said to be
- (a) atomic.
 - (b) polymorphic.
 - (c) principle elements.
 - (d) first-class entities.
 - (e) anonymous.
- #7 A function that returns a Boolean value is known as
- (a) a logical function.
 - (b) a predicate function.
 - (c) a declarative function.
 - (d) a relational function.
 - (e) a Boolean function.
- #8 The three flow control mechanism provided by Scheme are
- (a) IF, COND, and recursion.
 - (b) IF-ELSE, FOR, WHILE.
 - (c) IF, SWITCH, WHILE.
 - (d) IF, COND, WHILE.
 - (e) COND, WHILE, recursion.
- #9 The LET expression in LISP
- (a) is a means of parameter selection at run-time.
 - (b) defines a local variable that can be used in an expression.
 - (c) violates the functional programming paradigm since it creates local memory storage.
 - (d) is simply a more readable/writable shorthand for a lambda expression applied to a parameter.
 - (e) creates a look-up table that is used to speed up expression evaluation.
- #10 Scheme language requires that _____ functions be converted to iterative implementations.
- (a) looping
 - (b) recursive
 - (c) counter-controlled looping
 - (d) tail-recursive
 - (e) head-recursive