Quiz 1

Which of the following is NOT required for a programming language?

A. Syntax

B. A compiler

C. Semantics

D. Abstraction

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Which of the following languages is NOT Turing-complete?

A. LISP

B. BASH

C. The x86 MOV instruction

D. Regular Expressions

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LISP was the first high–level programming language of which paradigm?

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Functional

This family of primarily imperative programming languages came with most early personal computers (including the Apple II and Commodore 64) and inspired a whole generation of programmers:

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BASIC

Many recently developed, general–purpose programming languages are adopting features from which paradigm?

A. Functional

B. Imperative

C. Procedural

D. Quantum

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Quiz 2

C's type system is:

A. Strong

B. Static

C. Dynamic

D. Procedural

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Which C keyword allows you to define named types?

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typedef

A binary operator has two:

A. Types

B. Instructions

C. Operands

D. Grammars

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In which stage of the compiler would an error for this code be produced?

```
int x;

x = "abc";
```

A. Lexing

B. Parsing

C. Semantic Analysis

D. Code Generation

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D. Code Generation

A compiler may apply many _____ in order to produce faster and/or smaller code.

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Optimizations

OR

Transformation Passes

Quiz 3

An object is a(n) _____ of a class.

A. member

B. method

C. struct

D. instance

An object is a(n) _ _ _ _ _ _ of a class.

A. member

B. method

C. struct

D. instance

Pass-by-value is typically slower than pass-by-reference because it must create a(n) _____ of the object.

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copy

Classes tie together which two parts of a program?

A. Data and performance.

B. Functions and methods.

C. Data and behavior.

D. Behavior and performance.

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D. Behavior and performance.

_____ allows classes to be defined as derivations of other classes.

A. Inheritance

B. Encapsulation

C. Abstraction

D. The Common Language Runtime (CLR)

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D. The Common Language Runtime (CLR)

Classes may define "private" members in order to take advantage of what object-oriented principle?

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Encapsulation

Quiz 4

_____ compilers convert bytecode into machine code on-the-fly.

A. Ahead-of-time

B. Just-in-time

C. Load-time

D. Reactive

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Bytecode is typically consumed by the VM in binary form so that it doesn't have to _____ the bytecode.

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parse

Which of the following is NOT an example of polymorphism?

A. Generics

B. Encapsulation

C. Templates

D. Subtyping

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Parametric polymorphism helps you create _____ code.

A. Fast

B. Correct

C. Object-oriented

D. Reusable

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Some VMs choose to _ _ _ _ _ _ the code before compiling it to reduce startup time. The CLR does not do this.

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before compiling it to reduce startup time.
The CLR does not do this.

interpret

Quiz 5

Which of the following is NOT an advantage of automatic memory management?

A. Reduction of security vulnerabilites

B. Code is easier to write

C. Reduced burden on the programmer

D. Increased program performance

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B. Code is easier to write

C. Reduced burden on the programmer

D. Increased program performance

Automatic memory management strategies typically store extra information in an object's _____.

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metadata

When two objects hold references to each other, there is a reference _____.

A. pointer

B. object

C. cycle

D. counter

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A basic form of garbage collection has two main phases: _____.

A. Allocation and initialization

B. Interpretation and compilation

C. Garbage reclamation and release

D. Garbage detection and reclamation

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BASH stores variables in a key/value map called the _____. Every process has one of these.

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environment