Python Modules, Classes — Quiz (Medium)

Auto-generated quiz (medium) for Python Modules, Classes

Subject:	Python Modules, Classes
Assessment Type:	Quiz
Difficulty Level:	Medium
Total Questions:	7
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Question 1 [1 marks] *(medium)*

According to the provided text, what two main components do Python classes bundle together?

Question 2 [2 marks] *(medium)*

What is the primary purpose of a Python class?

A. To execute code immediately upon program startup.

B. To bundle data and functionality into a new type of object.

C. To define global variables accessible throughout the program.

D. To store a collection of unrelated functions.

Question 3 [2 marks] *(medium)*

What can be attached to a class instance to maintain its state and modify it?

A. Only attributes for state, but not methods.

B. Only methods for state modification, but not attributes.

C. Attributes for state and methods for state modification.

D. Global constants and local variables.

Question 4 [2 marks] *(medium)*

What is the purpose of a Python package's `__path__` attribute?

A. To define the package's version number.

B. To list all modules already imported by the package.

C. To specify directories for future searches of modules and subpackages within it.

D. To declare the package's main execution entry point.

Question 5 [2 marks] *(medium)*

Define a Python class `Animal` with an `__init__` method that takes `name` and `species` as arguments and assigns them to instance attributes. Add an instance method `describe` that returns a string in the format 'Name: [name], Species: [species]'.

Question 6 [2 marks] *(medium)*

Given the `Animal` class (with `__init__(self, name, species)` and a `describe()` method returning 'Name: [name], Species: [species]'), define a Python class `Dog` that inherits from `Animal`. `Dog`'s `__init__` should take `name` and `breed`, setting `species` to 'Dog'. Override the `describe` method to return 'Name: [name], Species: Dog, Breed: [breed]'.

Question 7 [1 marks] *(medium)*

Define a Python class `Calculator` that contains a `staticmethod` named `add`. The `add` method should take two integer arguments, `a` and `b`, and return their sum.