**Section 7.2 Defining Classes for Objects**

7.1 \_\_\_\_\_\_\_\_\_\_ represents an entity in the real world that can be distinctly identified.

A. A class

B. An object

C. A method

D. A data field

B

Answer analysis:B

7.2 \_\_\_\_\_\_\_ is a template, blueprint, or contract that defines objects of the same type.

A. A class

B. An object

C. A method

D. A data field

A

Answer analysis:A

7.3 An object is an instance of a \_\_\_\_\_\_\_\_\_\_.

A. program

B. class

C. method

D. data

B

Answer analysis:B

7.4 The keyword \_\_\_\_\_\_\_\_\_\_ is required to define a class.

A. def

B. return

C. class

D. All of the above.

C

Answer analysis:C

7.5 \_\_\_\_\_\_\_\_ is used to create an object.

A. A constructor

B. A class

C. A value-returning method

D. A None method

A

Answer analysis:A

7.6 The \_\_\_\_\_\_\_\_ creates an object in the memory and invokes \_\_\_\_\_\_\_\_\_\_.

A. the \_\_init\_\_ method

B. the init method

C. the initialize method

D. the \_\_str\_\_ method

A

Answer analysis:A

7.7 Analyze the following code:

class A:

def \_\_init\_\_(self, s):

self.s = s

def print(self):

print(s)

a = A("Welcome")

a.print()

A. The program has an error because class A does not have a constructor.

B. The program has an error because class A should have a print method with signature print(self, s).

C. The program has an error because class A should have a print method with signature print(s).

D. The program would run if you change print(s) to print(self.s).

D

Answer analysis:D

7.8 Analyze the following code:

class A:

def \_\_init\_\_(self, s):

self.s = s

def print(self):

print(self.s)

a = A()

a.print()

A. The program has an error because class A does not have a constructor.

B. The program has an error because s is not defined in print(s).

C. The program runs fine and prints nothing.

D. The program has an error because the constructor is invoked without an argument.

D

Answer analysis:D

7.9 Analyze the following code:

class A:

def \_\_init\_\_(self, s = "Welcome"):

self.s = s

def print(self):

print(self.s)

a = A()

a.print()

A. The program has an error because class A does not have a constructor.

B. The program has an error because s is not defined in print(s).

C. The program runs fine and prints nothing.

D. The program has an error because the constructor is invoked without an argument.

E. The program runs fine and prints Welcome.

E

Answer analysis:E

7.10 Given the declaration x = Circle(), which of the following statement is most accurate.

A. x contains an int value.

B. x contains an object of the Circle type.

C. x contains a reference to a Circle object.

D. You can assign an int value to x.

C

Answer analysis:C

**Section 7.4 Hiding Data Field**

7.11 Analyze the following code:

class A:

def \_\_init\_\_(self):

self.x = 1

self.\_\_y = 1

def getY(self):

return self.\_\_y

a = A()

print(a.x)

A. The program has an error because x is private and cannot be access outside of the class.

B. The program has an error because y is private and cannot be access outside of the class.

C. The program has an error because you cannot name a variable using \_\_y.

D. The program runs fine and prints 1.

E. The program runs fine and prints 0.

D

Answer analysis:D

7.12 Analyze the following code:

class A:

def \_\_init\_\_(self):

self.x = 1

self.\_\_y = 1

def getY(self):

return self.\_\_y

a = A()

print(a.\_\_y)

A. The program has an error because x is private and cannot be access outside of the class.

B. The program has an error because y is private and cannot be access outside of the class.

C. The program has an error because you cannot name a variable using \_\_y.

D. The program runs fine and prints 1.

E. The program runs fine and prints 0.

B

Answer analysis:B

7.13 Analyze the following code:

class A:

def \_\_init\_\_(self):

self.x = 1

self.\_\_y = 1

def getY(self):

return self.\_\_y

a = A()

a.x = 45

print(a.x)

A. The program has an error because x is private and cannot be access outside of the class.

B. The program has an error because y is private and cannot be access outside of the class.

C. The program has an error because you cannot name a variable using \_\_y.

D. The program runs fine and prints 1.

E. The program runs fine and prints 45.

E

Answer analysis:E

7.14 In the following code,

def A:

def \_\_init\_\_(self):

\_\_a = 1

self.\_\_b = 1

self.\_\_c\_\_ = 1

\_\_d\_\_ = 1

# Other methods omitted

Which of the following is a private data field?

A. \_\_a

B. \_\_b

C. \_\_c\_\_

D. \_\_d\_\_

B

Answer analysis:B

7.15 Analyze the following code:

class A:

def \_\_init\_\_(self):

self.x = 1

self.\_\_y = 1

def getY(self):

return self.\_\_y

a = A()

a.\_\_y = 45

print(a.getX())

A. The program has an error because x is private and cannot be access outside of the class.

B. The program has an error because y is private and cannot be access outside of the class.

C. The program has an error because you cannot name a variable using \_\_y.

D. The program runs fine and prints 1.

E. The program runs fine and prints 45.

B

Answer analysis:B

7.16 Which of the following statement is most accurate?

A. A reference variable is an object.

B. A reference variable refers to an object.

C. An object may contain other objects.

D. An object may contain the references of other objects.

BD

Answer analysis:BD

7.17 What is the value of times displayed?

def main():

myCount = Count()

times = 0

for i in range(0, 100):

increment(myCount, times)

print("myCount.count =", myCount.count, "times =", times)

def increment(c, times):

c.count += 1

times += 1

class Count:

def \_\_init\_\_(self):

self.count = 0

main()

A. count is 101 times is 0

B. count is 100 times is 0

C. count is 100 times is 100

D. count is 101 times is 101

B

Answer analysis:B