Test

Python Sets - Test

Multiple Choice Questions (MCQs):

1. Which of the following is a correct way to create a set in Python?
   a) `my_set = {1, 2, 3}`
   b) `my_set = (1, 2, 3)`
   c) `my_set = [1, 2, 3]`
   d) `my_set = set[1, 2, 3]`
2. What is the result of the following code?

```
s = {1, 2, 2, 3}
print(s)
```

   a) `{1, 2, 2, 3}`
   b) `{1, 2, 3}`
   c) `[1, 2, 3]`
   d) `Error`

Class 2:

1. Which method is used to add an element to a set?
   a) `add()`
   b) `append()`
   c) `insert()`
   d) `extend()`

2. Which of the following operations will remove all elements from a set?
   a) `clear()`
   b) `delete()`
   c) `removeAll()`
   d) `discardAll()`
3. What will be the output of this code?

```
a = {1, 2, 3}
b = {3, 4, 5}
print(a & b)
```

   a) `{1, 2, 3, 4, 5}`
   b) `{3}`
   c) `{}`
   d) `Error`
4. What is the result of the following code?

```
x = {1, 2, 3}
y = {3, 4, 5}
print(x.symmetric_difference(y))
```

   a) `{1, 2, 3, 4, 5}`
   b) `{1, 2, 4, 5}`
   c) `{3}`
   d) `{}`
5. Which of the following is **not** a valid set operation?
   a) `set1 | set2`
   b) `set1 + set2`
   c) `set1 & set2`

d) `set1 - set2`

Practical Questions:

1. Create a set named `fruits` with the items: "apple", "banana", and "cherry".

Class 2:

1. Add the item "orange" to the `fruits` set and print the updated set.
2. Write a program to find the union and intersection of the following sets:

```
set1 = {"apple", "banana", "cherry"}
set2 = {"banana", "cherry", "date"}
```

3. Remove the element "banana" from `set1` using the appropriate method.
4. Write a program to check if one set is a subset of another.
5. Create two sets of numbers from 1 to 10 and 5 to 15. Then find:
    - Elements present only in the first set
    - Elements present only in the second set
    - Elements common to both sets
    - All unique elements from both sets