1. Which of the following are used for the loop Control in Python Programming Language?
   1. for
   2. break
   3. continue
   4. pass

   ○ 1 and 2
   ○ 1, 3 and 4
   ○ 1, 2, and 3
   ◉ 2,3 and 4

Explanation: The for keyword is used to create a loop whereas the break, continue, and pass keywords are used to control the flow of the loop.

2. Which of the following can be iterated using a for loop or a while loop?

   String
   List
   Tuple
   Integer

   ○ 1 and 2
   ○ 1, 3 and 4
   ◉ 1, 2, and 3
   ○ 2,3 and 4

Explanation: String, list and Tuple can be iterated over using for and while loop. For example: for char in 'pwskills': if char=='w': print(f"Found {char} in the pwskills") else: print(f"{char} not found in the pwskills") The above piece of code will print Found w in the pwskills else will print w not found in the pwskills.

3. What will be the output of the following code:

```
for course in ['Data Science Masters', 'ML', 'data science masters', 'DL']:
    if len(course)!= 2:
        print('PwSkills' , end=' ')
```

   ○ Pwskills Pwskills
   ○ Pwskills
   ◉ Pwskills Pwskills Pwskills
   ○ None

Explanation: We will check the length of each item in the list and check if it is equal to 2. If the length of the item is not equal to 2 we will print Pwskills. Since in our list, only 2 items have a length not equal to two so the Pwskills will be printed twice.

4. What will be the output of the following code:

```
sum = 0
for i in range(1,100):
    sum += i
    if sum > 100:
        break
print(sum)
```

   ○ A number equal to 100
   ○ A number less than 100
   ◉ A number greater than 100
   ○ None

Explanation: The loop will start summing up the numbers from 1 to 100. In each iteration, the sum of the numbers will increase. When the sum value will be greater than 100 the loop will be terminated. So the Sum will be a number greater than 100.

5. What will be the output of the following code:

```
i=0
while i< 1:
    print('pwskills')
```

   ◉ Infinite loop
   ○ 100 times pwskills
   ○ 200 times pwskills
   ○ None

Explanation: Initially i is equal to zero. For the first iteration i<1, therefore the loop will print pwskills. But as we have not incremented the value of i after the print statement, The while loop will run infinitely.

6. Choose the correct one for the given below statements.

   for loop cannot be used with range().
   for loop can be used with an if else statement.
   for loop can be used with the break, continue and pass keywords.

   ○ True, False, False
   ○ True, True, True
   ◉ False, True, True
   ○ False, False, False

Explanation: for loop can be used with the range method. for loop can also be used with conditional statements and with loop control keywords.

7. What is the purpose of the following code?

```
num = 2
sum = 0
while num <=20:
    sum += num
    num += 2
    count+=1
print(sum)
```

   ◉ Sum of first 10 Even numbers
   ○ Sum of first 10 Natural numbers
   ○ Sum of first 10 Odd Numbers
   ○ None

Explanation: The program runs till the number is less than or equal to 20. The initial value of num is 2, which is even. Also, the num is incremented by 2 in each iteration, which also results in an even number. The loop runs for a total of 10 times and finally prints the sum of the first 10 even numbers.

8. Which of the following can be used with if-else statements to check conditions?

   == and !=
   >= and <=
   > and <

   ◉ 1,2, and 3
   ○ 1 and 3
   ○ 2 and 3
   ○ None

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