Python Test

1. A certain grade of steel is graded according to the following conditions:
   (i) Hardness must be greater than 50
   (ii) Carbon content must be less than 0.7
   (iii) Tensile strength must be greater than 5600

   The grades are as follows:
   Grade is 10 if all three conditions are met
   Grade is 9 if conditions (i) and (ii) are met
   Grade is 8 if conditions (ii) and (iii) are met
   Grade is 7 if conditions (i) and (iii) are met
   Grade is 6 if only one condition is met
   Grade is 5 if none of the conditions are met

   Write a program, which will require the user to give values of hardness, carbon content and tensile strength of the steel under consideration and output the grade of the steel.

2. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:
   Percentage >= 90% : Grade A
   Percentage >= 80% : Grade B
   Percentage >= 70% : Grade C
   Percentage >= 60% : Grade D
   Percentage >= 40% : Grade E
   Percentage < 40% : Grade F

3. Write a progam to take input of a year and check if it is leap year or not using nested if

4. Create a program that asks the user to input their age and gender. If the person is female and their age is between 18 and 25, display "You are eligible
for the women's scholarship." For males, display "You are not eligible for the
women's scholarship." For other age ranges, display "You are not eligible for
any scholarships."

5. Write a C program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:
Percentage >= 90% : Grade A
Percentage >= 80% : Grade B
Percentage >= 70% : Grade C
Percentage >= 60% : Grade D
Percentage >= 40% : Grade E
Percentage < 40% : Grade F

6. If the three sides of a triangle are entered through the keyboard, write a program to check whether the triangle is isosceles, equilateral, scalene

7. Write a code to take input of a numbers till the user wants and in the last print how many negative positive and zeros user entered using function

8. Write a code to take input of a number and check which of its digits are even and odd example :- 1234 1 is odd 2 is even etc and in the end calculate the sum of all even and odd numbers separately and print the sum

9. Write a code to check if a number is armstrong or not

1. What function is used to check the data type of a variable
   a. Print
   b. Type

c. Input

d. None of the above

2. Why do we use variables

3. What function is used to print in python

a. Scanf

b. Type

c. printf

d. None of the above

4. What function is used to take input in python

a. Scanf   c. print

b. Input   d. Type

5. How many operators are there in python write all of them

6. What function is used to take input in python

a. Scanf

b. Cin

c. Input

d. fgets

What will be the output of the following programs

```python
a = 10

if a = 1:
    print("True")

else:
    print("False")
```

```python
a = 10

if a:
    print("True")
```

```python
else:
    print("False")
```

```python
a = 10

if not a == 10:
    print("True")

else:
    print("False")
```