INDIAN SCHOOL AL WADI AL KABIR
Worksheet, 2021-22

Class: XI	SUB: INFORMATICS PRACTICES	Date of Completion:
Worksheet No:2	TOPIC: Brief overview of Python Holiday Homework	10-08-2021

Q.I **Theory questions**

1.Write a brief overview of python. That includes what is python, who invented it, when, where and why. Why it is named so, etc.,

2.Explain the two execution modes in Python. Differentiate between them.

3.Explain the following terms with a suitable example:
    i. Python Keywords ii. Identifiers iii.Variables iv. Constants v. Operators

4.Name the rules for naming the identifier in Python.

5.What do you mean by the following terms in Python programming.
    i. Data Types ii. Number   iii. String

6.List out the following operators.
    i. Arithmetic operators ii. Relational/Comparison operators   iii. Assignment operators
    iv. Logical operators   v. Membership operators

7. What are expressions? Give suitable examples.

8.What do you mean by input () and print ( ) functions ?why do you need them in python?

9.What is debugging? Diffentiate between syntax, semantic, logical and runtime errors. Give suitable example to each of them.

10.What do you mean by flow of control in the programming? There are 3 constructs. Name them.

Q.II Practical questions

  1. Guess the output
     i)   10+20*2+4/2

ii)   (3+4) *2

iii)   12 + (6-2) ** 3 // 6 – 2 * 1

iv)   2 + 4 – 6 * 3 // 2 ** 3

2. Guess the output

print(75-25)

print("75-25")

print(100*2)

print("100*2")

3. What is the expected output? Why?

i)   A=100

        B=200

        C + = A+B

        print("Result = ",C)

ii)   P=5

        Q=10

          P+=Q

    R*=P+Q

    print(P,R)

4. Give the output (Boolean values True or False), Give the reason if any error occurs and Rewrite the statement with correct syntax.

C, D, E =55, 15, 25

i)   C > D and E < C

ii)   C < D OR E >= 30

iii)   not E

iv)   D = = (E – 10)

v)   E ! = 25

5. If a=3, b=4 Write python expressions and then guess the output:

i)   a+b /a b

ii) $(a+b)^2/(a^2+b)$

iii) a^2+b^2+2ab

iv) $2a+(4b)^2$

6. Guess the output i) if number=50   ii) if number=75

    number = int(input("Enter the number?"))

    if number==10:

```
        print("number is equals to 10")
    elif number==50:
        print("number is equal to 50")
    elif number==100:
        print("number is equal to 100")
    else:
        print("number is not equal to 10, 50 or 100")
```

7. Guess the output i) if marks = 72   ii) marks 29   iii) marks = 34
```
    marks = int(input("Enter the marks? "))
    f marks > 85 and marks <= 100:
        print("Congrats ! you scored grade A ...")
    elif marks > 60 and marks <= 85:
        print("You scored grade B + ...")
    elif marks > 40 and marks <= 60:
        print("You scored grade B ...")
    elif (marks > 30 and marks <= 40):
        print("You scored grade C ...")
    else:
        print("Sorry you are fail ?")
```

8. Guess the output i) if num=30   ii) num=24
```
    num = int(input("enter the number?"))
    if num%3== 0 and num%4==0:
        print("Number is Divisible by both 3 and 4...")
    else:
        print("Number is not divisible by both 3 and 4...")
```

9. Guess the output i) if num=1122   ii) if num = 100   iii) if num = 10001
```
    num = 1122
    if 9 < num < 99:
        print("Two digit number")
    elif 99 < num < 999:
        print("Three digit number")
    elif 999 < num < 9999:
        print("Four digit number")
    else:
        print("number is <= 9 or >= 9999")
```

10. Write the logical expression for the following:
    a) A is greater than B and C is greater than D
    b) P is smaller than Q or not S is equals to 20

c) J is greater than or equals to 25 and K is smaller than to 0

Q.III Practical questions (Develop a Python program)

1) Write a program to convert distance in Meters to Kilometer and Meter.
   Hint: If Input Meters = 3560, then output = 3 KM and 560 M
   1 KM = 1000 Meters
2) Write a program to calculate Simple Interest and Compound Interests.
3) Write a program to input bill amount, calculate and display discount (15% of bill amount)
   and Net Amount Payable (bill amount – discount).
4) Write a program to check whether the last digit of a number (entered by user) is
   divisible by 3 or not.
5) Write a program to check whether years is leap year or not.
6) Write a program to accept a number from 1 to 7 and display the name of the day like 1 for
   Sunday, 2 for Monday and so on.
7) Accept any city from the user and display monument of that city.

City	Monument
Delhi	Red Fort
Agra	Taj Mahal
Jaipur	Jal Mahal

8) Write a program to accept percentage from the user and display the grade according to the
   following criteria:

Marks	Grade
> 90	A
> 80 and <= 90	B
>= 60 and <= 80	C
below 60	D

9) Write a program to accept the cost price of a bike and display the road tax to be paid
   according to the following criteria:

Cost price (in Rs)	Tax
> 100000	15 %
> 50000 and <= 100000	10%
<= 50000	5%

10) Write a program to calculate the electricity bill (accept number of units from user)
    according to the following criteria:

Unit	Price
First 100 units	no charge
Next 100 units	Rs 5 per unit
After 200 units	Rs 10 per unit

(For example if input unit is 350 than total bill amount is Rs2,000)