THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

GRADE :11: INFORMATICS PRACTICES-QUESTION BANK

Chapter – 3: PYTHON FUNDAMENTALS

Very Short answer Type Questions

1. **What is None literal in Python?**

Ans: Python has one special literal, which is **None**. The None literal is used to indicate absence ofvalue. It is also used to indicate the end of lists in Python. It means "There is nothing here".

2. **What is the error in following code: x, y =7 ?**

Ans: The following error comes - 'int' object is not iterable. Which means an integer object i.e. cannotbe repeated for x and y. one more integer object is required after 7.

3. **what will the following code do: a=b=18 ?**

Ans: This code will assign 18 to a and b both.

4. **Following code is creating problem X = 0281, find reason.**

Ans: 0281 is an invalid token.

5. **Find the error in the following code:**

(a)
```
temp=90
Print
temp
```

(b)
```
a=12
b = a + b print( a And b)
```

(c)
```
print("x="x)
```

(d)
```
a, b, c=2, 8, 4
print(a, b, c)
c, b, a = a, b, c
print(a; b; c)
```

(e)
```
x = 23
4 = x
```

(f)
```
else = 21-4
```

Ans:
(a) Missing parentheses in call to 'print'.
(b) Name „b" is not defined.
(c) Invalid Syntax.
(d) Invalid Syntax in second print statement.
(e) can't assign to literal in second line.
(f) Invalid Syntax.

6. **Find the error in the following code:**

(a)
```
y = x +5
5)print(x,y)
```

(b)
```
a=input("Value: ")
b = a/2
print( a, b)
```

(c)
```
print(x = y =
```

Ans: (a) Name 'x' is not defined.

(b) Unsupported operand type(s) for /: 'str' and 'int'.

(c) Invalid Syntax.

Short Answer Type Questions

7. What is the difference between a keyword and an identifier?

Ans: Difference between Keyword and Identifier: Every language has keywords and identifiers, which are only understood by its compiler. Keywords are predefined reserved words, which possess special meaning. An identifier is a unique name given to a particular variable, function or label of class in the program.

8. What are literals in Python? How many types of Literals allowed in Python?

Ans: Literals: Python comes with some built-in objects. Some are used so often that Python has a quick way to make these objects, called literals.

The literals include the string, Unicode string, integer, float, long, list, tuple and dictionary types.

9. How many types of sequences are supported in Python?

Ans: Three Types of Sequences are supported in python:

(i) String

(ii) List

(iii) Tuple

10. What factors guide the choice of identifiers in program?

Ans: (i) An identifier must start with a letter or underscore followed by any number of digitsand/or letters.

(ii) No reserved word or standard identifier should be used.

(iii) No special character (Other than underscore) should be included in the identifier.

11. What is the difference between an expression and a statement in Python?

Ans: A statement is an instruction that the Python interpreter can execute. We have only seen the assignment statement so far. Some other kinds of statements that we‟ll see shortlyare while statements, forstatements, if statements, and import statements. (There are other kinds too!)

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. If you ask Python to print an expression, the interpreter evaluates the expression and displays the result.

12. What are tokens in Python? How many types of tokens allowed in Python?

Ans: Tokens are the smallest unit of the program. There are following

tokens in Python:

- Reserved words or Keywords
- Identifiers
- Literals
- Operators
- Punctuators

Definition of all tokens may come. Which is not given in this question bank.

13. **What are operators? What is their function? Give examples of some unary and binaryoperators.**

Ans: "Operators are those symbols used with operands, which tells compiler which operation is to be done on operands." in other words – "operators are tokens that trigger some computation/actionwhen applied to variables and other objects in an expression."

Operators are of following types:

- **Unary operators** like (+) Unary Plus, (-) Unary Minus, not etc.
- **Binary Operators** like (+) addition, (*) multiplication, and etc.

14. **What is block/code block/suit in Python?**

Ans: Sometimes a group of statements is part of another statement of function. Such a group of oneor more statements is called **block** or **code-block** or **suit** in python. e.g.

```
if a>b:
    print("A is graeter")
    print("Value of A is : ",a)
else:
    print("B is graeter")
    print("Value of A is : ",b)
```

Here both the sections are separate code-blocks

15. **What is the role of indentation in Python?**

Ans: Indentation plays a very important role in Python. Python uses indentation to create blocks of code. Statements at same indentation level are part of same block/suit. You cannot unnecessarilyindent a statement; python will raise an error for that.

16. **How many types of strings are supported by Python?**

Ans: Python supports two types of strings:

(i) Single-line string That terminates in single line.

(ii) Multi-line String That stores multiple lines of text.

Skill Based Questions

17. What will be the sizes of following constants?
(a) '\a' (b) "\a" (c) "Kumar\'s" (d) '\"' (e) "it's"

Ans: (a) 50 (b) 50 (c) 56 (d) 50 (e) 53

This screenshot is the output of the above question.

```
>>> sys.getsizeof(a)
28
>>> sys.getsizeof('\a')
50
>>> sys.getsizeof("\a")
50
>>> sys.getsizeof("kumar\'s")
56
>>> sys.getsizeof('\"')
50
>>> sys.getsizeof("it's")
53
```

18. How can you create multi-line strings in Python?

Ans: We can create multi-line string by putting a backslash (\) at the end of line which allows you tocontinue typing in next line in same string.

```
>>> Text1="Hello\
World"
>>> Text1
'HelloWorld'
```

19.Which of the following are syntactically correct strings? State reason.

(a) "Python is nice Language"
(b) "He called me "Friend!" when he came"
(c) "Very Good'
(d) "This is a good book"
(e) "Namaste
(f) "I liked 'Harry Potter' very much"

Ans: (a) Correct (b) Correct (c) Incorrect (d) Correct (e) Incorrect (f) Correct

20.. What is the error in following Python program with one statement?

print("My name is : ", name)suggest a solution

Ans: Error is : "name 'name' is not defined". And the solution is to declare the variable-name beforethis statement.

```
>>> name="aa"
>>> print("My name is : ", name)
My name is :  aa
```

21. Predict the output of the following:

```
x,y=7,2
x,y,x=x+1,y+3,x+10
print(x,y)
```

Ans: *Output:* *17 5*

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

```
name='Hari'
age=18
print(name,", you are ",age," now but ",end="")
print("You will be ",age+1," next Year")
```

Ans: Output: Hari , you are 18 now but You will be 19 next year

23. Write a Program to obtain temperature in Celsius and convert it into Fahrenheit usingformula –

C X 9/5 + 32 = F

Ans:
```
c=int(input("Enter the value in Celsius"))
f =(c * 9/5) + 32
print("Temperature in fahrenheit is : ",f)
```

24. Predict output:

```
a,b,c=2,3,4
a,b,c=a*a,a*b,a*c
print(a,b,c)
```

Ans: Output: 4 6 8

25. WAP to read todays date (only date Part) from user. Then display how many days areleft in the current month.

Ans:
```
import datetime
td=0
now=datetime.datetime.now()
print(now.day)
if now.month==2:
    td=28
elif now.month in(1,3,5,7,8,10,12):
    td=31
else:
    td=30
print("Total remaining days in the current month are : ", td-now.day)
```

26. WAP to print the area of circle when radius of the circle is given by user.

Ans:
```
r=int(input("Enter the radius : "))
area= 3.14*r*r
print("Area of circle is : ",area)
```

27. WAP to print the volume of a cylinder when radius and height of the cylinder is givenby user.

Ans:
```
r=int(input("Enter the radius : "))
h=int(input("Enter the height : "))
vol=3.14*r*r*h
print("Volume of Cylinder is : ",vol)
```

28. WAP that asks your height in centimeters and converts it into foot and inches.

Ans:

```
cm=int(input("Enter height in Centimeters : "))
foot=cm//30
rcm=cm%30
inches=rcm*0.393701
print("Height is : ",foot," Foot ",inches," Inches ")
```

29. WAP to find area of a triangle.

Ans:

```
import math
a=int(input("Enter side 1 on triangle : "))
b=int(input("Enter side 2 on triangle : "))
c=int(input("Enter side 3 on triangle : "))
s=(a+b+c)/2
area=s*math.sqrt((s-a)*(s-b)*(s-c))
print("Area of Triangle is : ",area)
```

30. WAP to calculate simple interest.

Ans:

```
p=int(input("Enter Principal : "))
r=int(input("Enter Rates : "))
t=int(input("Enter Time :"))
si=(p*r*t)/100
print("Simple Interest is :",si)
```

31. WAP to read a number in n and prints n^2, n^3, n^4

Ans:

```
n=int(input("Enter value of n : "))
print("n^2 : ",n*n)
print("n^3 : ",n*n*n)
print("n^4 : ",n*n*n*n)
```