

THE ARMY PUBLIC SCHOOL, DHAULA KUAN
RESET TEST EXAMINATION (2019)
CLASS : XI
SUBJECT : COMPUTER SCIENCE PYTHON

TIME: 3 HRS

M.M.-70

Q1(a) Which operations result in 8? (1)
(a) $65 // 8$ (b) $17 \% 9$ (c) $2 * * 4$ (d) $64 * * 0.5$

Q1(b) What are the rules for naming an identifier? (2)

Q2 (a) Do the following conversions: (2x2=4)

- 1) $(75)_{10}$ to $(?)_2$
2) $(1AF)_{16}$ to $(?)_{10}$

Q2 (b) Identify the Datatypes of variables: (2)

- i. Marks of students ii. Grade of students('A','B','C')

Q2 (c) Count the number of bytes for different strings (2)

- (i) `print(len("Hello\n Fine"))` (ii) `print(len("How\are\nyou\n"))`

Q2 (d) Evaluate the following expressions and write the output : (2)

```
a=(2+3)**3-6/2
b=(2+3)*5//4+(4+6)/2
print(a,b)
```

Q3 Find the output:

(a) `print math.pow(4,2)` (1)

(b) `str='The string is not in lowercase format'`
`print ("The position of 'in' at:", str.find('in'))` (1)

(c) `str='together with computer'`
`print (str.split('e'))` (2)

(d) `p=[1,7,2,6,4,9]` (1)
`p.insert(3,2)`
`print (p)`

(e) `n=[1,4,2,6,9,5]` (2)
`print n[:4]`
`print n[-1:-4:-2]`

Q4(a) What is the difference between mutable and immutable variables? Give an example. (2)

Q4 (b) Write following arithmetic expressions using operators in Python: (1x4=4)

- 1) $x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$
2) $x = a^3 + b^3 + c^3$
3) e^{2-x}

4) $(\cos x / \tan x) + x$

Q4 (c) Write output if a= 3 b=21 c= 5 (2)

if (a>=150):

b=b+100

c=c+200

else:

b=b-40

c=c-100

print(" a is ",a," ,b is ",b, " and c is ",c)

Q5 Write the function / method to do the following: (4x 1 =4)

- To Convert the first letter of a word in uppercase
- To check for an alphabet or a digit
- To trim the spaces both from left and right side.
- To change lower letters into upper case and upper case into lower case letters.

Q6 (a) **Change the following for loop into a while loop (2)**

for j in range(10,1,-2):

print ("j=",j)

(b) **What is the difference between del and pop methods of List? Give e.g. (2)**

(c) Observe the following program and answer the questions that follows:

```
import random
```

```
x=3
```

```
n=random.randint(1,x)
```

```
for i in range(n):
```

```
print(i,'#',i+i)
```

(a) What is the minimum and maximum number of times the loop will execute? [1]

(b) Find out, which line of output(s) out of (i) to (iv) will not be expected from the program? [1]

(i)0#1

(ii)1#2

(iii)2#3

(iv)3#4

(d) List two logical operators in python with an example. [2]

(e) From the following, find out the valid identifier. Give reasons , if invalid: [2]

i. 3name

ii. total amt

iii. IF

iv. A1

(f) Rewrite the following code after removing syntactical errors. Underline each correction done in the code. [2]

```
For name in ["teena", 'reena', "reeta]
```

```
if name[0]='r':
```

```
print(name)
```

Q7 (a) **Write a Python program to print (3)**

1

1 2

1 2 3

1 2 3 4

(b) **WAP to print the Fibonacci series till n terms: (3)**

0

1

1

2

3

5

8

13.....upto n terms

(c) **Write a program to accept marks in five subjects. The function will display the total and percentage and will allot the grades accordingly:** (4)

Percentage	Grade
≥ 90	A
≥ 80 and < 90	B
< 80	C

Q8(a) Write a program to count the number of upper case letters, no of lowercase letters, no of digits and special characters. (3)

Q8 (b) Differentiate between the following: (2*3=6)

- 1) Comparison operator and Membership operators
- 2) Break and continue
- 3) For loop and while loop

Q8 (c) Write a program to count occurrences of a substring in a string . (3)

Q8 (d) **Write a program to enter a string and remove all vowel characters from the string.** (4)

-----X-----X-----X-----