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**Half Yearly Exam-2018**

**CLASS-XI**

**SUB: COMPUTER SCI**

**M.M:70**

**Que: 1**

- a) Is Python a free and open source language. ,how .[1]
- b) How python is a cross platform language ? [1]
- c) Write the advantages of python programming language.[1]

**Que: 2**

- a) Define keyword with example. [1]
- b) What are variables? How we can create variable in python give examples. [1]
- c) The following code is not giving desired output. We want to input value as 20 and obtain output as 40. Identify the problem and do the required correction in the code [1]

```
x=input("Enter number :")  
y = x*4
```

```
print(y)
```

- d) What will be the output of the following code? [1]

```
x=45
```

```
y=x+1
```

```
x=20,y+x
```

```
print(x,y)
```

- e) Predict the output? [2]

```
x =10
```

```
x= x+15
```

```
x=x-5
```

```
print(x)
```

```
x,y = x-2 , 22
```

- f) Define identifiers. Identify the valid and invalid identifiers in the following list. [2]

i) x\_y\_z

ii) x\_abc@1

iii) 1abc\_d3

iv) continue

- g) Write a program in python to obtain the length and breadth of rectangle and find its area.[2]

- h) Write a program in python to obtain the principal amount, rate and time and calculate the compound interest..[2]

**Que:3**

- a) Explain the use of // (floor division) operator and = = operator with example.

[1]

- b) Explain mutable and immutable data types in python. [1]
- c) Identify the type of following literals? [2]  
 i) 45.789                      ii) 23789                      iii) "True"                      iv) 0XFACE
- d) Explain implicit and explicit type casting . [2]
- e) What are comments? How comments are specified in python give example . [2]
- f) Write the equivalent python expression for the following expressions. [2]  
 i)  $\sqrt{a^2+b^2+c^2}$                       ii)  $(p + q) / (r+s)^4$
- g) What will be the output produced by following code? [2]  
`a,b,c,d =9.2 , 2.0 , 4 , 21`  
`print (a/2)`  
`print(a//4)`  
`print(b**c)`  
`print(a%c)`
- h) Explain about relational and logical operators in python with example. [3]

**Que:4**

- a) Write a program to find the factorial of a number and draw its flow chart . [3]
- b) Write a program in python to calculate the telephone bill of a customer based on the following criteria. [3]  
 i. For the first 100 calls the minimum bill amount is 100 Rs.  
 ii. For the next 50 calls Rs. 0.40 per call will be charged extra.  
 iii. For the next 50 calls Rs. 0.50 per call will be charged extra.  
 iv. For the calls beyond 200 Rs. 0.60 per call will be charged extra.
- c) Write a program in python to find the roots of a quadratic equation  $ax^2+bx+c$ . [3]
- d) Write a program in python to perform arithmetic operations (+, -, \*, /, %). [2]
- e) Write a program in python to enter a number and check whether it is positive or negative. [2]

**Que:5**

- a) Write a program in python to enter a number and check whether it is prime number or not. [4]
- b) Write a program to find the sum of even numbers and odd numbers between 1 to n separately. [3]
- c) Write a program in python to print the following series. [3]  
**2      5      10      17      26      37**
- d) Define what are iteration statements .Write the syntax of while loop . [2]
- e) Write the following program using while loop. [2]  
`for l in range(1,16):`  
`if i%3 == 0 :`  
`print(i)`

**Que:6**

- a) Explain different types of errors in python with examples. [3]
- b) Write the differences between testing and debugging. [1]

**Que:7**

- a) Write a program that reads a string and change the string in uppercase. [2]
- b) What is the use of isupper( ) and isalnum( ) methods in python explains with example.[2]
- c) What is string slice? find the output of following python code : [2]

```
Str=" java program"  
Str[2:5]  
Str[:6]
```

- d) Write a program to search for an element in a given list of numbers. [2]
- e) What is list data type in python? [2]