**Q1. Why do we call Python as a general purpose and high-level programming language?**

Python is used for any real world application development, hence it is classified as General Purpose. The language is understandable for humans easily , hence it is called as high-level programming language.

**Q2. Why is Python called a dynamically typed language?**

The data type of the variables used in the program are determined at runtime, hence Python is called a dynamic typed language.

**Q3. List some pros and cons of Python programming language?**

Pro – Open source development, accepted by major companies for development, easy to learn, has vast source of libraries

Cons – not suitable for mobile apps development and games development since it consumes more memory and has slow processing speed.

**Q4. In what all domains can we use Python?**

Python is popularly used in the domains – web development, data engineering, data science, machine learning.

**Q5. What are variable and how can we declare them?**

Variables are basic unit of storage in a programming language. A Python variable is a name given to a memory location. In Python it is not required to declare a variable or specify its type before using it. A variable is created the moment we first assign a value to it.

**Q6. How can we take an input from the user in Python?**

We can take input from user in Python using input function. The data type provided by the user is considered as string.

**Q7. What is the default datatype of the value that has been taken as an input using input() function?**

The default datatype of the value taken as input using input() is String.

**Q8. What is type casting?**

Type casting is method to change the data type as required.

**Q9. Can we take more than one input from the user using single input() function? If yes, how? If no, why?**

Input() can take only 1 value since it is assigned to a variable.

**Q10. What are keywords?**

Keywords are reserved words in Python, which has to be used only for the specific purpose as specified in Pyton.

**Q11. Can we use keywords as a variable? Support your answer with reason.**

No, since it is used for a specific purpose in Python, variable names cannot be keywords.

**Q12. What is indentation? What's the use of indentaion in Python?**

Indentation makes the readability of code easier. For eg. The section to be executed under For loop are indented to know the steps which belong to the for loop exection.

**Q13. How can we throw some output in Python?**

By using Print statement.

**Q14. What are operators in Python?**

Operators are special symbols for doing specific computation.

**Q15. What is difference between / and // operators?**

/ is used for division of two numbers

// is used to get the quotient without decimal numbers

**Q16. Write a code that gives following as an output.**

**iNeuroniNeuroniNeuroniNeuron**

x='iNeuron'

for i in range(1,5):

    x=x+'iNeuron'

print(x)

**Q17. Write a code to take a number as an input from the user and check if the number is odd or even.**

y=input('enter a number ')

if(y%2==0):

    print(y,' is even number')

else:

    print(y,' is odd number')

**Q18. What are boolean operator?**

Boolean operators (and or not) are used to give result as True or False.

**Q19. What will the output of the following?**

**1 or 0** - 1

**0 and 0** - 0

**True and False and True** - False

**1 or 0 or 0**  - 1

**Q20. What are conditional statements in Python?**

if, else , elif

**Q21. What is use of 'if', 'elif' and 'else' keywords?**

if- for checking the condition  
 elif – checking one more condition after if condition  
 else – the code is executed if all the previous if or elif fails

**Q22. Write a code to take the age of person as an input and if age >= 18 display "I can vote". If age is < 18 display "I can't vote".**

age = 16

if age>18:

    print('I can vote')

else:

    print('I cant vote')

**Q23. Write a code that displays the sum of all the even numbers from the given list.**

**numbers = [12, 75, 150, 180, 145, 525, 50]**

num = [12, 75, 150, 180, 145, 525, 50]

sum = 0

for i in num:

    if (i%2==0):

        sum=sum+i

print(sum)

**Q24. Write a code to take 3 numbers as an input from the user and display the greatest no as output.**

first\_num=(‘input first number ‘)

second\_num=(‘input second number ‘)

third\_num=(‘input third number ‘)

first\_num=9

second\_num=8

third\_num=11

if (first\_num>second\_num):

    if(first\_num>third\_num):

        print(first\_num,' is greater')

    else:

        print(third\_num,' is greater')

elif (second\_num>third\_num):

    print(second\_num,' is greater')

else:

    print(third\_num,' is greater')

**Q25. Write a program to display only those numbers from a list that satisfy the following conditions**

**The number must be divisible by five**

**If the number is greater than 150, then skip it and move to the next number**

**If the number is greater than 500, then stop the loop**

**numbers = [12, 75, 150, 180, 145, 525, 50]**

**Q26. What is a string? How can we declare string in Python?**

**Q27. How can we access the string using its index?**

**Q28. Write a code to get the desired output of the following**

**string = "Big Data iNeuron"**

**desired\_output = "iNeuron"**

**Q29. Write a code to get the desired output of the following**

**string = "Big Data iNeuron"**

**desired\_output = "norueNi"**

**Q30. Resverse the string given in the above question.**

**Q31. How can you delete entire string at once?**

**Q32. What is escape sequence?**

**Q33. How can you print the below string?**

**'iNeuron's Big Data Course'**

**Q34. What is a list in Python?**

**Q35. How can you create a list in Python?**

**Q36. How can we access the elements in a list?**

**Q37. Write a code to access the word "iNeuron" from the given list.**

**lst = [1,2,3,"Hi",[45,54, "iNeuron"], "Big Data"]**

**Q38. Take a list as an input from the user and find the length of the list.**

**Q39. Add the word "Big" in the 3rd index of the given list.**

**lst = ["Welcome", "to", "Data", "course"]**

**Q40. What is a tuple? How is it different from list?**

**Q41. How can you create a tuple in Python?**

**Q42. Create a tuple and try to add your name in the tuple. Are you able to do it? Support your answer with reason.**

**Q43. Can two tuple be appended. If yes, write a code for it. If not, why?**

**Q44. Take a tuple as an input and print the count of elements in it.**

**Q45. What are sets in Python?**

**Q46. How can you create a set?**

**Q47. Create a set and add "iNeuron" in your set.**

**Q48. Try to add multiple values using add() function.**

**Q49. How is update() different from add()?**

**Q50. What is clear() in sets?**

**Q51. What is frozen set?**

**Q52. How is frozen set different from set?**

**Q53. What is union() in sets? Explain via code.**

**Q54. What is intersection() in sets? Explain via code.**

**Q55. What is dictionary ibn Python?**

**Q56. How is dictionary different from all other data structures.**

**Q57. How can we delare a dictionary in Python?**

**Q58. What will the output of the following?**

**var = {}**

**print(type(var))**

**Q59. How can we add an element in a dictionary?**

**Q60. Create a dictionary and access all the values in that dictionary.**

**Q61. Create a nested dictionary and access all the element in the inner dictionary.**

**Q62. What is the use of get() function?**

**Q63. What is the use of items() function?**

**Q64. What is the use of pop() function?**

**Q65. What is the use of popitems() function?**

**Q66. What is the use of keys() function?**

**Q67. What is the use of values() function?**

**Q68. What are loops in Python?**

**Q69. How many type of loop are there in Python?**

**Q70. What is the difference between for and while loops?**

**Q71. What is the use of continue statement?**

**Q72. What is the use of break statement?**

**Q73. What is the use of pass statement?**

**Q74. What is the use of range() function?**

**Q75. How can you loop over a dictionary?**

**Coding problems**

**Q76. Write a Python program to find the factorial of a given number.**

**Q77. Write a Python program to calculate the simple interest. Formula to calculate simple interest is SI = (PRT)/100**

**Q78. Write a Python program to calculate the compound interest. Formula of compound interest is A = P(1+ R/100)^t.**

**Q79. Write a Python program to check if a number is prime or not.**

**Q80. Write a Python program to check Armstrong Number.**

**Q81. Write a Python program to find the n-th Fibonacci Number.**

**Q82. Write a Python program to interchange the first and last element in a list.**

**Q83. Write a Python program to swap two elements in a list.**

**Q84. Write a Python program to find N largest element from a list.**

**Q85. Write a Python program to find cumulative sum of a list.**

**Q86. Write a Python program to check if a string is palindrome or not.**

**Q87. Write a Python program to remove i'th element from a string.**

**Q88. Write a Python program to check if a substring is present in a given string.**

**Q89. Write a Python program to find words which are greater than given length k.**

**Q90. Write a Python program to extract unquire dictionary values.**

**Q91. Write a Python program to merge two dictionary.**

**Q92. Write a Python program to convert a list of tuples into dictionary.**

**Input : [('Sachin', 10), ('MSD', 7), ('Kohli', 18), ('Rohit', 45)]**

**Output : {'Sachin': 10, 'MSD': 7, 'Kohli': 18, 'Rohit': 45}**

**Q93. Write a Python program to create a list of tuples from given list having number and its cube in each tuple.**

**Input: list = [9, 5, 6]**

**Output: [(9, 729), (5, 125), (6, 216)]**

**Q94. Write a Python program to get all combinations of 2 tuples.**

**Input : test\_tuple1 = (7, 2), test\_tuple2 = (7, 8)**

**Output : [(7, 7), (7, 8), (2, 7), (2, 8), (7, 7), (7, 2), (8, 7), (8, 2)]**

**Q95. Write a Python program to sort a list of tuples by second item.**

**Input : [('for', 24), ('Geeks', 8), ('Geeks', 30)]**

**Output : [('Geeks', 8), ('for', 24), ('Geeks', 30)]**

**Q96. Write a python program to print below pattern.**

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**Q97. Write a python program to print below pattern.**

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**Q98. Write a python program to print below pattern.**

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**\* \* \* \* \***

**Q99. Write a python program to print below pattern.**

**1**

**1 2**

**1 2 3**

**1 2 3 4**

**1 2 3 4 5**

**Q100. Write a python program to print below pattern.**

**A**

**B B**

**C C C**

**D D D D**

**E E E E E**