



GOVERNMENT POLYTECHNIC, CHAPRA

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PYTHON PROGRAMMING
SUBJECT CODE – 2018305

3rd SEM – Computer Science and Engineering

FACULTY NAME
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1. Who developed Python Programming Language?
 - a) Wick van Rossum
 - b) Rasmus Lerdorf
 - c) Guido Van Rossum
 - d) Niene Stom
2. Which type of Programming does Python support?
 - a) object-oriented programming
 - b) structured programming
 - c) functional programming
 - d) all of the mentioned
3. Is Python case sensitive when dealing with identifiers?
 - a) no
 - b) yes
 - c) machine dependent
 - d) none of the mentioned
4. Which of the following is the correct extension of the Python file?
 - a) .python
 - b) .pl
 - c) .py
 - d) .p
5. What will be the value of the following Python expression, $4+3\%5$
 - a) 7
 - b) 2
 - c) 4
 - d) 1
6. Which of the following is used to define a block of code in Python language?
 - a) Indentation
 - b) Key
 - c) Brackets
 - d) All of the mentioned
7. Which keyword is used for function in Python language?
 - a) Function
 - b) def
 - c) Fun
 - d) Define
8. Which of the following character is used to give single-line comments in Python?
 - a) //
 - b) #
 - c) !
 - d) /*

9. What will be the output of the following Python code snippet if $x=1$?
- ```
x<<2
```
- a) 4
  - b) 2
  - c) 1
  - d) 8
10. Which of the following is true for variable names in Python?
- a) underscore and ampersand are the only two special characters allowed
  - b) unlimited length
  - c) all private members must have leading and trailing underscores
  - d) none of the mentioned
11. What are the values of the following Python expressions?
- ```
2** (3**2)
(2**3)**2
2**3**2
```
- a) 512, 64, 512
 - b) 512, 512, 512
 - c) 64, 512, 64
 - d) 64, 64, 64
12. Which of the following is the truncation division operator in Python?
- a) |
 - b) //
 - c) /
 - d) %
13. What will be the output of the following Python function?
- ```
len(["hello", 2,4,6])
```
- a) Error
  - b) 6
  - c) 4
  - d) 3
14. What will be the output of the following Python statement?
- ```
>>>"a" +"bc"
```
- a) bc
 - b) abc
 - c) a
 - d) bca
15. What arithmetic operators cannot be used with strings in Python?
- a) *
 - b) -
 - c) +
 - d) All of the mentioned
16. Which one of the following is the use of function in python?
- a) Functions don't provide better modularity for your application
 - b) you can't also create your own functions

- c) Functions are reusable pieces of programs
- d) All of the mentioned

17. What is the maximum possible length of an identifier in Python?

- a) 79 characters
- b) 31 characters
- c) 63 characters
- d) any length

18. What will be the output of the following Python program?

```
a= list(range(5))  
print(a)
```

- a) error
- b) [0,1,2,3,4]
- c) 0, 1, 2
- d) none of the mentioned

19. What will be the output of the following Python code?

```
x='abcd'  
For i in range (len(x))  
print(i)
```

- a) error
- b) 1, 2, 3, 4
- c) a, b, c, d
- d) 0, 1, 2, 3

20. What are the two main types of functions in Python?

- a) System function
- b) Custom function
- c) Built-in function & User defined function
- d) User function

21. What is Python? What are the benefits of using Python? Write the features of python. Is Python front end or backend language?

22. What are tokens, keywords and identifiers? Write rules for declaring an identifier. How many keywords are present in python? Write a program to find whether the given number is positive or negative.

23. Discuss about basic data types and container data types with example. Write a program to find a maximum of the two numbers.

24. Name the five methods used in list and tuple data types and explain them. What are the common built-in data types in Python?

25. What is break, continue and pass statements in Python? Write a program to demonstrate working of three statements.

26. What are modules and packages in Python? Write a program to check whether a given string is palindrome or not.

27. What is slicing in Python? Explain the slicing operations using positive and negative indexing. What are negative indexes and why are they used?
28. How to create a class in python? Write a program for making calculator using functions in python.
29. How do you write an If else statement? Write its syntax and a program to check largest number of the three.
30. How does range function work in Python? How do you sort a list in descending order in python? Discuss about dictionary and set data types in python?
31. Write a program that matches a string that has a followed by one or more b's. Choose text by your own.
32. What is regular expression in python? Explain the functions of regular expression. How many types of comment are there in python?
33. What is the difference between a mutable and an immutable data type? Give name of data types that are mutable and immutable.
34. Is Python a compiled language or an interpreted language? Which is the first version of python and which is current version of python? Write the comedy series name from which python name is developed.
35. What is a function and write its syntax? What is difference between parameter and argument? Is the number of parameters and argument need to be equal in number? How are arguments passed by value or by reference?
36. What is the difference between / operator and // operator in Python? Demonstrate with help of example. Is Indentation required in Python? If yes, explain why?
37. What is Polymorphism in Python? How do you do data abstraction in Python?
38. How to delete a file using Python? What is while loop? Give its syntax.
39. Write in-built modules and explain them with their methods.
40. Write a code snippet to reverse a string. Write a code snippet to sort a list in Python.
41. Write a program to check whether a number is prime or not.
42. What are the two modes used in python? Explain them.
43. What is the Python "with" statement designed for? Discuss the difference between merge, join and concatenate?
44. Given a positive integer number, write a function that returns True if number is a perfect square else False. How would you use the ternary operators in Python?
45. Write the syntax for opening a file in Python and list the file opening modes.
46. Explain the applications of Python in various fields. Write a python program to access one modules variable and function in another module.

47. What is the difference between augmented assignment operator and assignment operator? Discuss about precedence and associativity of operators with precedence table.
48. List any three libraries in python. Define keyword. Give any two examples of keyword.
49. Explain arithmetic, logical, relational, bitwise and assignment operators with example.
50. Write a program in python to input a two-digit number and print it in words. For example, if input is 98, the output should be 'nine eight'.
51. Define Aliasing in python. Write a program to reverse a string.
52. Write a Program to print factorial of a number using user input.
53. Discuss in detail all the types of operators in list, string and tuple
54. What does IDLE stand for? What are the steps of downloading and installing the IDLE?
55. Write a program to add two matrices in Python.
56. What is Numpy in python? Create a Numpy array filled with all zeros.
57. How to compare two NumPy arrays? How does NumPy differ from Python lists, and what advantages does NumPy offer?
58. What is the purpose of the `np.zeros()` and `np.ones()` functions in NumPy? How can you perform element-wise multiplication of two NumPy arrays?
59. How can you calculate the dot product of two arrays using NumPy? What is the significance of the dot product in linear algebra? Explain the purpose of the `np.save()` and `np.load()` functions in NumPy. How can these functions be used to save and load arrays?
60. Discuss the purpose of the NumPy axis parameter in array operations. Provide examples of operations where the axis parameter is applicable. What is the purpose of the NumPy dtype attribute? How does it influence array memory allocation?