

Note: Based on the given material, a special test will be conducted in the 1<sup>st</sup> week of June.

- Who created Python? Guido Van Rossum, in 1991
- Is Python case sensitive when dealing with Identifiers?  
a) Yes      b) No      c) Machine dependent      d) none  
(Case is always significant)
- What is the maximum possible length of an identifier?  
a) 31 characters      b) 63 characters      c) 79 characters  
d) none  
(Identifiers can be of any length)
- Which of the following is not invalid?  
a) \_a=1      b) \_a=-1      c) \_str\_=1      d) none  
(All the statements will execute automatically but at the cost of reduced readability)
- Which of the following is an invalid variable?  
a) my\_string\_1      b) 1<sup>st</sup>\_string      c) foo      d) \_  
(variable names should not start with a number)
- Which of the following is not a keyword?  
a) eval      b) assert      c) nonlocal      d) poss  
(eval can be used as a variable)
- All keywords in Python are in \_\_\_\_\_.  
a) lowercase      b) uppercase      c) capitalized      d) none  
(True, False and None are capitalized while the others are in lowercase)
- Which of the following is the use of function in python?  
a) Functions are reusable pieces of programs  
b) Functions don't provide better modularity for your application  
c) You can't create your own functions  
d) All
- Which keyword is used for function?  
a) Fun      b) Define      c) Def      d) Function

10. What is the output of the below program?

- def sayHello( ):
  - print ('Hello world!')
  - say Hello( )
  - say Hello( )
- a) Hello World!      b) 'Hello World!'  
Hello world!      'Hell world!'
- c) Hello      d) None  
Hello

11. What is the output of below program?

- def print Max(1, b):
  - if a>b
  - print (a, 'is maximum')
  - elif a==b
  - print (a, 'is equal to', b)
  - else
  - print (b, 'is maximum')
  - print Max (3, 4)
- a) 3      b) 4      c) 4 is maximum      d) none

12. What is the output of the below program?

- x=50
  - def fun(x):
  - print ('x is', x)
  - x=2
  - print ('changed local x to', x)
  - func(x)
  - print ('x is now', x)
- a) x is now 50      b) x is now 2      c) x is now 100      d) none

13. Which is the correct operator for power (x<sup>y</sup>)?

- a) x^y      b) x\*\*y      c) x^^y      d) None  
(power operator is x\*\*y 2\*\*3=8)

14. Which one of these is floor division?

- a) /      b) //      c) %      d) None

[When both of the operands are integer then python chops out the fraction part and gives you the round off value, to get the accurate answer use floor division.

ex 5/2=2.5  
both int ans 2  
but floor division 2.5]

15. What is the order of precedence in python?  
 i) Paranthesis      ii) Exponential      iii) Multiplication  
 iv) Division      v) Addition      vi) Subtraction  
 a) i, ii, iii, iv, v, vi      b) ii, i, iii, iv, v, vi  
 c) ii, i, iv, iii, v, vi      d) i, ii, iii, iv, vi, v  
 [For order of precedence PEMDAS]
16. What is the answer of this expression, 22%3 is?  
 a) 7      b) 1      c) 0      d) 5  
 (Modulus gives the remainder, that is 1)
17. Mathematical operations can be performed on a string, state whether true or false.  
 a) True      b) False  
 (You can't perform mathematical operation on string even if the string is in the form '1 2 3 4')
18. Operators with the same precedence are evaluated in which manner?  
 a) Left to Right      b) Right to Left      c) Can't say      d) None
19. What is the output of this expression 3\*1\*\*3?  
 a) 27      b) 9      c) 3      d) 1  
 3\*1\*\*3=3 [precedence 1<sup>st</sup> power, multiplication]
20. Which one of the following have the same precedence?  
 a) Addition and subtraction      b) Multiplication and division  
 c) Both addition & subtraction and multiplication & division      d) none
21. Python was released publicly in \_\_\_\_\_.  
 a) 1941      b) 1971      c) 1981      d) 1991
22. Python is said to be easily \_\_\_\_\_.  
 a) readable language      b) writable language  
 c) bug-able language      d) script-able language
23. Which of the following function convert a string to a float in python?  
 a) in(x, base)      b) long(x[base])      c) float (x)      d) str(x)
24. What is the default return value for a function that does not return any value. Explicitly?  
 a) int      b) double      c) public.      d) none
25. Which of the following items are present in the function header?  
 a) function name      b) parameter list      c) a & b      d) return value
26. Which of the following enclose the input parameters or arguments of a function?  
 a) brackets      b) parenthesis      c) curly braces      d) quotation marks
27. Which of the following keywords marks the beginning of the function block?  
 a) fun      b) define      c) def      d) function
28. What is the name given to that area of memory, where the system stores the parameters and local variables of a function call?  
 a) a heap      b) storage area      c) a stack      d) an array
29. Which of the following Function definition does not return any value?  
 a) a function that prints integers from 1 to 100  
 b) a function that returns a random integer from 1 to 100  
 c) a function that checks whether the current second is an integer from 1 to 100  
 d) a function that converts an uppercase letter to lowercase.
30. Which of the following statement is correctly represent the function body in the given code snippet?  
 def f(number):  
 print (f(s))  
 a) return "number"      b) print (number)      c) print ("number")  
 d) return number
31. What is the output of the following code snippet?  
 def func (message, num=1):  
 print (message ^num)  
 func('welcome')  
 func ('viewers', 3)  
 a) Welcome      b) welcome  
 viewers      viewers viewers viewers  
 c) welcome      d) welcome  
 viewers viewers viewers
32. What is the output of the following code snippet?  
 def my func (text, num):  
 while num>0:  
 print (text)  
 num=num-1  
 my func ('Hello', 4)

- a) Hello Hello Hello Hello      b) Hello Hello Hello Hello  
c) invalid call                      d) infinite loop
33. Which of the following would you relate to a function call made with an argument passed as its parameter?  
a) function invocation      b) pass by value  
c) pass by reference      d) pass by name
34. \_\_\_\_\_ represents an entity in the real world with its identity and behaviour.  
a) a method   b) an object      c) a class      d) an operator
35. \_\_\_\_\_ is used to create an obj.  
a) class      b) constructor      c) user-defined fun  
d) in\_built functions
36. The small sections of code that are used to perform a particular task is called \_\_\_\_\_.  
a) subroutines      b) files      c) Pseudo code      d) Modules
37. Which of the following is a unit of code that is often defined within a greater code structure?  
a) Subroutines      b) function      c) definition      d) Modules
38. Which of the following is a distinct syntactic block?  
a) Subroutines      b) function      c) definition      d) Modules
39. The variables in a function definition are called as \_\_\_\_\_.  
a) Subroutines      b) function      c) definition      d) parameters
40. The values which are passed to a function definition are called  
a) arguments      b) subroutines      c) function      d) Definition
41. Which of the following mandatory to write the type annotations in the function definition?  
a) curly braces      b) parenthesis      c) square brackets  
d) indentations

42. Which of the following defines what an object can do?  
a) Operating system      b) Compiler      c) Interface      d) Interpreter
43. Which of the following carries out the instructions defined in the interface?  
a) Operating system      b) compiler      c) implementation  
d) interpreter
44. The functions which will give exact result when same arguments are passed called \_\_\_\_\_.  
a) Impure function      b) Partial function  
c) dynamic function      d) Pure function
45. The functions which cause side effects to the arguments passed are called \_\_\_\_\_.  
a) impure function      b) partial functions  
c) dynamic functions      d) pure functions

### Ch-2 Data Abstraction

1. \_\_\_\_\_ is a powerful concept in computer science.  
a) data abstraction      b) data hiding      c) data members      d) none
2. \_\_\_\_\_ means splitting a program into many modules.  
a) Abstraction      b) modularity      c) Data variables      d) none
3. \_\_\_\_\_ is a type for objects whose behaviour is defined by a set of value and set of operations.  
a) user defined data type      b) derived data type  
c) Abstract data type      d) All
4. \_\_\_\_\_ are the representation for 'Abstraction Data Type'.  
a) Object      b) Classes      c) function      d) all
5. \_\_\_\_\_ gives an implementation independent view.  
a) Derived types      b) concrete      c) abstract      d) (a) or (b)

6. The process of hiding detail is known as \_\_\_\_\_.
- a) abstraction    b) data hiding    c) encapsulation    d) none
7. List ADT can be implemented using \_\_\_\_\_ linked list and \_\_\_\_\_ linked list.
- a) singly    b) double    c) a & b    d) a or b
8. \_\_\_\_\_ and \_\_\_\_\_ ADT can be implemented using list.
- a) Stack    b) Queue    c) a or b    d) a & b
9. Two functions in data abstraction are \_\_\_\_\_ & \_\_\_\_\_.
- a) Constructors and Selectors    b) Lists and Tuples  
c) Constructors and destructors    d) All
10. \_\_\_\_\_ are functions that build the abstract data type.
- a) Selectors    b) Cosntructors    c) Objects    d) a & b
11. \_\_\_\_\_ are functions to retrieve the information from the data type.
- a) Selectors    b) Constructors    c) Objects    d) a & b
12. \_\_\_\_\_ is used to create an object.
- a) a & b    b) Constructors    c) Objects    d) Selectors
13. \_\_\_\_\_ extract individual pieces of information from the object.
- a) Objects    b) Selectors    c) Constructors    d) a or b
14. \_\_\_\_\_ data representation is defined as an independent part of the program.
- a) mutual    b) Immutual    c) concrete    d) all
15. Which strategy is followed for designing program?
- a) 'wishful thanking'    b) 'Best match'    c) 'First match'    d) all
16. Python provides a compound structure called \_\_\_\_\_.
- a) list    b) Tuple    c) pair    d) objects
17. The first way to implement pair is with the \_\_\_\_\_ construct.
- a) Tuple    b) list    c) pair    d) none
18. \_\_\_\_\_ is constructed by placing expressions within square brackets.
- a) Tuple    b) Object    c) list    d) pair
19. List is also called as \_\_\_\_\_.
- a) List literal    b) String literal    c) list construct    d) all
20. \_\_\_\_\_ can store multiple values.
- a) list    b) abstract    c) ADT    d) None
21. Any way of building two values together into one can be considered as a \_\_\_\_\_.
- a) class    b) function    c) pair    d) none
22. How many ways to represent data types?
- a) 1    b) 2    c) 3    d) 4
23. num[0] represents which index position of the value?
- a) zero    b) first    c) second    d) fourth
24. \_\_\_\_\_ notation is used to access the data you stored in the pair.
- a) {}    b) ( )    c) [ ]    d) :
25. \_\_\_\_\_ construct is used to represent multipart object, where each part is named.
- a) list    b) class    c) Tuple    d) all

### Ch-1 Functions

Answer the following: (2 Marks)

1. What is an algorithm?
2. What are sub-routines?
3. Write about function declaration.
4. Write about function specification.
5. What are parameters and arguments?
6. Differentiate between interface and implementation.
7. Mention the characteristics of Interface.

Answer the following: (3 Marks)

1. Distinguish between
  - i) Abstract class & Concrete class
  - ii) Interface & Implementation
  - iii) Pure & Impure function

### Ch-2 Data Abstraction

Answer the following: (2 Marks)

1. What is meant by structures with examples?
2. What are the uses of data abstraction?
3. What is abstract data type?
4. What is a pair? Give an example.
5. What is tuple?

Answer the following: (3 Marks)

1. Distinguish between
  - i) Constructors & Selectors
  - ii) List & Tuples
  - iii) Concrete & Abstract datatype
2. What is list? Give examples.
3. What are the different ways to access elements of a list? Give example.
4. What strategy is used for program defining? Define that strategy.
5. How many ways are there for representing paired data type?

### Ch-3 Scoping

Answer the following: (2 Marks)

1. What is scope?
2. Why scope should be used for variables? State the reason.

3. What is mapping?

4. What do you mean by names space?

5. How python represents the protected access specifiers?

Answer the following: (3 Marks)

1. Define local scope with an example.
2. Define global scope with an example.
3. Define Enclosed scope with an example.
4. Define Modules.
5. Why same class is required to invoke public?
6. Why access control is required?
7. Write the benefits of using modules.
8. Write the characteristics of modules.

**[Refer Classwork]**