Test Booklet No. :

A3-R5 : Programming and Problem Solving Through Python

Test Booklet Series : **23**

Time Allowed : 2 Hours

Maximum Marks : 100

Roll No. :

Answer Sheet No. :

Read the following instructions carefully before you begin to answer the questions.

Name of Candidate : _____ Signature of Candidate : _____

1. What is 'f' in the following statement ?

   f=open("Data.txt", "r")

   (A) File Name   (B) File Handle

   (C) Mode of file   (D) File Handling

2. Which translator is used to convert assembly language into machine language ?

   (A) Compiler   (B) Interpreter

   (C) Assembler   (D) None of these

3. What is the output of following Python code ?

   >>>print(5*(2//3))

   (A) 3   (B) 3.3

   (C) 0   (D) error

4. What will be the output of the following pseudo code ?

   Integer a, b

       Set a = 10, b = 5

       a = a mod (a - 6)

       b = b mod (b - 2)

       Print a - b

   (A) 4   (B) 0

   (C) 1   (D) 8

5. What is the output of the following code snippet ?

   print([i.lower() for i in "HELLO"])

   (A) hello   (B) ['h','e','l','l','o']

   (C) hel   (D) HELLO

6. Which statement will return one line from a file (file object is 'f') ?

   (A) f.readlines( )   (B) f.readline( )

   (C) f.read( )   (D) f.line( )

7. What will be the output of the following code snippet ?

   d = {3, 4, 5}

   for k in d:

   print(k)

   (A) {3, 4, 5} {3, 4, 5} {3, 4, 5}

   (B) 3 4 5

   (C) Syntax Error

   (D) None of the above

8. Given a string x="hello" What is the output of x.count('l') ?

   (A) 2   (B) 1

   (C) 0   (D) none

9. For performing the addition of two numbers, which of the following symbol in a flow chart are used ?

   (A) Control flow   (B) Terminal

   (C) Processing   (D) Decision

10. Python is written in _____.

   (A) Java   (B) C

   (C) PHP   (D) All of the above

11. What will following code segment print ?

   if True or True:

       if False and True or False:

         print('A')

       elif False and False or True and True:

         print('B')

       else:

         print('C')

   else:

       print('D')

   (A) A   (B) B

   (C) C   (D) D

12. What will be the output of the following expression ?

x = 14

print(x>>2)

(A) 14   (B) 1

(C) 3   (D) 2

13. Which of the following declarations is incorrect ?

(A) _x = 2   (B) x = 3

(C) __xyz__ = 5   (D) None of these

14. Which symbol is used as a flowline to connect two blocks in a flow chart ?

(A) arrow   (B) circle

(C) box   (D) parallelogram

15. When we open file in append mode the file pointer is at the _____ of the file.

(A) anywhere in between the file

(B) end

(C) beginning

(D) second line of the file

16. What will be the output of the following pseudo code, where & represent ANd operation ?

Integer a, b, c

Set b = 5, a = 1

c = a & b

Print c

(A) 1   (B) 3

(C) 5   (D) 7

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

example = "helle"

example.rfind("e")

(A) 1   (B) 2

(C) 4   (D) 5

18. Which of the following words is not a keyword of python language ?

(A) val   (B) raise

(C) try   (D) with

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

numbers = (4, 7, 19, 2, 89, 45, 72, 22)

sorted_numbers = sorted(numbers)

odd_numbers = [x for x in sorted_numbers if x % 2 != 0]

print(odd_numbers)

(A) [7, 19, 45, 89]

(B) [2, 4, 22, 72]

(C) [4, 7, 19, 2, 89, 45, 72, 22]

(D) [2, 4, 7, 19, 22, 45, 72, 89]

20. What is the output of the following code ?

def s(n1):

    print(n1)

    n1 = n1 +2

n2=4

s(n2)

print(n2)

(A) 6 4   (B) 4 6

(C) 4 4   (D) 6 6

21. Which function is used to write data in binary mode ?

(A) write   (B) writelines

(C) dump   (D) pickle

22. In which of the following, data is stored permanently ?

(A) Variable

(B) File

(C) Both of the above

(D) None of the above

23. Which of the following software is required to run the hardware ?

(A) Task Manager

(B) Task Bar

(C) Program Manager

(D) Device Driver

24. Which of the following will delete key-value pair for key="tiger" in dictionary ?

dic={"lion":"wild","tiger":"wild","cat":"domestic", "dog"."domestic"}

(A) del dic["tiger"]

(B) dic["tiger"].delete()

(C) delete(dic.["tiger"])

(D) del(dic.["tiger"])

25. What will be the output of the following code snippet ?

from math import *

a = 2.19

b = 3.999999

c = -3.30

print(int(a), floor(b), ceil(c), fabs(c))

(A) 2 3 -3 3.3   (B) 3 4 -3 3

(C) 2 3 -3 3   (D) 2 3 -3 -3.3

26. To use a module in another module, you must import it using an _____ statement.

(A) import

(B) include

(C) both (A) and (B)

(D) none of the above

27. What is the output of the following code ?

import numpy as np

a = np.array([1,2,3])

print(a.ndim)

(A) 1   (B) 2

(C) 3   (D) 0

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

len(["hello",2, 4, 6])

(A) Error   (B) 6

(C) 4   (D) 3

29. What will be the output of the following ?

print(sum(1,2,3))

(A) Error   (B) 6

(C) 1   (D) 3

30. Which of the following is not an advantage of using modules ?

(A) Provides a means of reuse of program code

(B) Provides a means of dividing up tasks

(C) Provides a means of reducing the size of the program

(D) Provides a means of testing individual parts of the program

31. Which of the following functions is a built-in function in python ?

(A) factorial()   (B) print()

(C) seed()   (D) sqrt()

32. Which of the following error is returned by the given code ?

>>> f = open("test.txt","w")

>>> f.write(345)

(A) Syntax Error   (B) Type Error

(C) String Error   (D) Run Time Error

33. The brain of computer system is _____.
(A) RAM   (B) CPU
(C) ROM   (D) Control Unit

34. What is the output of the following ?
print(max([1, 2, 3, 4], [4, 5, 6], [7]))
(A) [4, 5, 6]   (B) [7]
(C) [1, 2, 3, 4]   (D) 7

35. What is the value of the following Python code ?
>>>print(36 / 4)
(A) 9   (B) 4
(C) 9.0   (D) 4.0

36. What does readlines() method return ?
(A) Dictionary   (B) String
(C) Tuple   (D) List

37. A _____ statement is used when a statement is required syntactically but you do not want any code to execute.
(A) break   (B) pass
(C) continue   (D) none of these

38. Recursive function is _____.
(A) A function that calls itself
(B) A function that calls other functions
(C) Both (A) and (B)
(D) None of the above

39. Which mode creates a new file if the file does not exist ?
(A) write mode
(B) read mode
(C) append mode
(D) Both (A) and (C)

40. Hierarchy in a pseudo-code can be shown by :
(A) Curly Braces   (B) Round Brackets
(C) Indentation   (D) Semicolon

41. The sequence logic will not be used while _____.
(A) Subtracting two numbers
(B) Comparing two data values
(C) Providing output to the user
(D) Adding two numbers

42. Which of the following are valid string manipulation functions in Python ?
(A) count()   (B) upper()
(C) strip()   (D) All of the above

43. Which of the following is used to define a block of code in Python language ?
(A) try   (B) Brackets
(C) Indentation   (D) Catch

44. What will be the output of the following Python code ?
from math import factorial
print(math.factorial(5))
(A) 120
(B) Nothing is printed
(C) Error, method factorial doesn't exist in math module
(D) Error, the statement should be : print(factorial(5))

45. What type of data is : arr = [(1, 1), (2, 2), (3, 3)] ?
(A) List of tuples
(B) Tuples of lists
(C) Array of tuples
(D) Invalid type

46. Choose the correct option with respect to Python.

(A) Both tuples and lists are immutable

(B) Tuples are immutable while lists are mutable

(C) Both tuples and lists are mutable

(D) Tuples are mutable while lists are immutable

47. What will be the output of following ?

Y=[2,5J,6]

Y.sort()

(A) [2,6,5J]   (B) [5J,2,6]

(C) Error   (D) [6,5J,2]

48. Which of the following is a valid arithmetic operator in Python ?

(A) //   (B) ?

(C) <   (D) and

49. What will be output for the following code ?

import numpy as np

a = np.array([2, 3, 4, 5])

print(a.dtype)

(A) int 32   (B) int

(C) float   (D) None of these

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

>>>list1 = [1, 3]

>>>list2 = list1

>>>list1[0] = 4

>>>print(list2)

(A) [1, 4]   (B) [1, 3, 4]

(C) [4, 3]   (D) [1, 3]

51. What is the output of the following ?

y = 'klmn'

for i in range(len(y)):

print(y)

(A) klmn klmn klmn klmn

(B) k

(C) k k k

(D) None of the option

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

tuple1=(5,1,7,6,2)

tuple1.pop(2)

print(tuple1)

(A) (5,1,6,2)   (B) (5,1,7,6)

(C) (5,1,7,6,2)   (D) Error

53. What will be the output of following statement ?

>>>"m"+"nl"

(A) 'm+nl'   (B) 'mnl'

(C) 'm nl'   (D) 'm'

54. The contents inside the "for loop" are separated by :

(A) colon   (B) comma

(C) semicolon   (D) hyphen

55. The correct extension of the Python file is _____.

(A) .py   (B) .pyth

(C) .python   (D) None of these

56. Which of the following symbols is used to represent output in a flow chart ?

(A) Square   (B) Circle

(C) Parallelogram   (D) Triangle

57. Which statement is correct to import all modules from the package ?

(A) from package import all

(B) from package import *

(C) from package include all

(D) from package include *

58. What is the datatype of x ?

import numpy as np

a=np.array([1,2,3,4])

x= a.tolist()

(A) int   (B) array

(C) tuple   (D) list

59. Which of the following error is returned when we try to open a file in write mode which does not exist ?

(A) File Found Error

(B) File Not Exist Error

(C) File Not Found Error

(D) None of the above

60. Debugging is the process of fixing a _____ in the software.

(A) procedure   (B) function

(C) bug   (D) None of these

61. Flow charts and Algorithms are used for _____.

(A) Better Programming

(B) Optimized Coding

(C) Systematic testing

(D) All the above

62. What is the output of the following ?

m = 0

      while m < 5:

         print(m)

         m += 1

         if m == 3:

         break

         else:

         print(0)

(A) 0 1 2 0   (B) 0 1 2

(C) 0 0 1 0 2   (D) error

63. _____ function returns the current position of file pointer.

(A) get( )   (B) tell( )

(C) seek( )   (D) cur( )

64. What will be output for the following code ?

import numpy as np

a = np.array([1,2,3,5,8])

print (a.ndim)

(A) 0   (B) 1

(C) 2   (D) 3

65. What is the output of the following code ?

import numpy as np

a = np.array([1,2,3,5,8])

b = np.array([0,3,4,2,1])

c = a + b

c = c*a

print (c[2])

(A) 10   (B) 21

(C) 12   (D) 28

66. Pictorial representation of an algorithm is called as _____.

(A) Statement   (B) Program

(C) Flow chart   (D) All the above

67. Kite/diamond symbol in flow chart is used for _____.

(A) Execution   (B) Decision

(C) Statement   (D) All of the above

68. In which format Binary file contains information ?

(A) Quick response code

(B) Same format in which the data is held in memory

(C) ASCII format

(D) Unicode format

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

```
def func(a, b=5, c=10):
print('a is', a, 'and b is', b, 'and c is', c)
func(13, 17)
func(a=2, c=4)
func(5,7,9)
```

(A) a is 13 and b is 15 and c is 10

    a is 2 and b is 5 and c is 4

    a is 5 and b is 7 and c is 9

(B) a is 13 and b is 17 and c is 10

    a is 2 and b is 4 and c is 4

    a is 5 and b is 9 and c is 7

(C) a is 13 and b is 17 and c is 10

    a is 2 and b is 5 and c is 4

    a is 5 and b is 7 and c is 9

(D) None of the above

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

```
def display(b, n):
        while n>0:
print(b, end="")
n=n-1
 display('z', 3)
```

(A) zzz

(B) zz

(C) Infinite loop

(D) An exception is thrown

71. What will be the output of the following algorithm for a=5, b=8, c=6 ?

Step 1 : Start

Step 2 : Declare variables a, b and c.

Step 3 : Read variables a, b and c.

Step 4 : If a < b

    If a < c

    Display a is the smallest number.

    Else

    Display c is the smallest number.

Else

    If b < c

    Display b is the smallest number.

    Else

    Display c is the smallest number.

Step 5 : Stop

(A) a is the smallest number

(B) b is the smallest number

(C) c is the smallest number

(D) stop

72. Which function is used to add an element (5) in the list list1 ?

(A) list1.sum(5)

(B) list1.add(5)

(C) list1.append(5)

(D) list1.addelement(5)

73. What is the use of the zeros() function in Numpy array in python ?

(A) To make a Matrix with all element 0

(B) To make a Matrix with all diagonal element 0

(C) To make a Matrix with first row 0

(D) None of the above

74. What is the output of the following ?

n=5

while n>0:

n-=1

if n ==2:

continue

print(n)

(A) 5 4 3 1 0

(B) 4 3 1 0

(C) 4 3 2

(D) None of these

75. Which of the following is not a control structure ?

(A) Loop

(B) Process

(C) Decision

(D) None of these

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

x = 'abcd'

for i in x:

print(i.upper())

(A) a B C D

(B) a b c d

(C) error

(D) A B C D

77. Choose the correct function declaration of fun1() so that we can execute the following two function calls successfully.

fun1(25, 75, 55)

fun1(10, 20)

(A) def fun1(**kwargs)

(B) def fun1(args*)

(C) No, it is not possible in Python

(D) def fun1(*data)

78. In python language, which of the following operators is the correct option for raising k to the power l ?

(A) k ^ l

(B) k**l

(C) k ^ ^ l

(D) k ^ *l

79. A detailed flow chart is called as _____.

(A) stack

(B) macro

(C) micro

(D) union

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

def power(x, y=2):

  r=1

  for i in range(y):

    r=r*x

  return r

print (power(3))

print (power(3,3))

(A) 212
32

(B) 9
27

(C) 567
98

(D) None of the above

81. NumPY stands for :

(A) Numbering Python

(B) Number In Python

(C) Numerical Python

(D) None of the above

82. What is the output of the following code ?

a = set('abc')

b = set('cdef')

print(a&b)

(A) {'c'}

(B) {'a','b','c','d','e','f'}

(C) {c}

(D) None of these

83. The connector symbol for flow chart is _____.

(A) Circle

(B) Parallelogram

(C) Diamond

(D) All the above

84. What will be output for the following code ?

import numpy as np

ary = np.array([1,2,3,5,8])

ary = ary + 1

print (ary[1])

(A) 0

(B) 1

(C) 2

(D) 3

85. Python supports the creation of anonymous functions at runtime, using a construct called _____.

(A) pi

(B) anonymous

(C) lambda

(D) none of the above

86. Which one of the following is immutable data type ?

(A) list

(B) set

(C) tuple

(D) dict

87. In which software development phase quality of software is documented ?

(A) Testing

(B) Delivery

(C) Idea

(D) Development

88. What will be output for the following code ?

import numpy as np

a = np.array([[1,2,3],[0,1,4]])

print (a.size)

(A) 1

(B) 5

(C) 6

(D) 4

89. A _____ stores information in the form of a stream of ASCII or unicode characters i.e. human readable.

(A) Text file

(B) Binary file

(C) Both (A) and (B)

(D) None of these

90. What is the output of the following code ?

M=['b' * x for x in range(4)]

 print(M)

(A) [' ', 'b', 'bb', 'bbb']

(B) ['b', 'bb', 'bbb', 'bbbb']

(C) ['b', 'bb', 'bbb']

(D) None of these

91. Which statement will move file pointer 10 bytes backward from current position ?

(A) f.seek(-10, 0)

(B) f.seek(10, 0)

(C) f.seek(-10, 1)

(D) none of the above

92. What will be the output of following ?

import numpy as np

a = np.array([[1,2,3],[4,5,6]])

print(a.shape)

(A) (2, 3)   (B) (3, 2)

(C) (1, 1)   (D) None of these

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

d1={"abc":5,"def":6,"ghi":7}

 print(d1[0])

(A) abc   (B) 5

(C) {"abc":5}   (D) Error

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

from math import *

floor(11.7)

(A) 12   (B) 11

(C) 11.0   (D) None of these

95. f.read(5) will read _____ from a file (file object 'f').

(A) 5 characters

(B) 5 words

(C) 5 lines

(D) None of the above

96. In python language, which of the following cannot be defined as variable ?

(A) _val   (B) val

(C) try   (D) _try_

97. Which of the following will read entire content of file (file object 'f') ?

(A) f.reads( )   (B) f.read( )

(C) f.read(all)   (D) f.read(*)

98. What is a variable defined outside a function referred to as ?

(A) A static variable

(B) A global variable

(C) A local variable

(D) An automatic variable

99. What is the output of the following ?

x=123

for i in x:

print(i)

(A) 1 2 3   (B) 123

(C) Error   (D) None of these

100. Structured program can be broken into _____ to assign to more than one developer.

(A) Segments   (B) Modules

(C) Units   (D) All the above

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SPACE FOR ROUGH WORK