

(6 pages)

Reg. No. : .....

**Code No. : 5376**

**Sub. Code : ZMAE 23**

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Second Semester

Mathematics

Elective — PYTHON PROGRAMMING – THEORY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. All the instructions are executed one after another is called \_\_\_\_\_  
(a) sequence                      (b) series  
(c) selection                      (d) iteration
2. \_\_\_\_\_ lines are used to connect symbols.  
(a) terminal                      (b) flow  
(c) decision                      (d) input

3. \_\_\_\_\_ is a method of solving a problem through a smaller version of the same problem  
(a) iteration                      (b) brute force  
(c) recursion                      (d) base case
4. Puzzler such as cross words and sudoku are good examples of \_\_\_\_\_  
(a) back tracking  
(b) flow chart  
(c) selection  
(d) sequence
5. Python was designed by \_\_\_\_\_  
(a) Charles Babbage  
(b) Guido Van Rossum  
(c) Russel  
(d) None
6. A \_\_\_\_\_ is one of the basic things a program works with, like a letter or a number.  
(a) value                      (b) script  
(c) inline                      (d) interpreter

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7. The \_\_\_\_\_ module contains like `sqrt()`, `gcd()` etc
- (a) `math`
  - (b) `string`
  - (c) `print`
  - (d) `import`
8. Functions that return results are called \_\_\_\_\_ function.
- (a) `math`
  - (b) `output`
  - (c) `fruitful`
  - (d) `return`
9. The characters of a string are indexed from \_\_\_\_\_ to \_\_\_\_\_
- (a)  $-\infty, \infty$
  - (b)  $0, n$
  - (c)  $0, n - 1$
  - (d)  $1 - n$
10. The characters of a string can be traversed using a \_\_\_\_\_
- (a) `for loop`
  - (b) `error`
  - (c) `print`
  - (d) `len`

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write the algorithm to print "Good morning".
- Or
- (b) State the rules for drawing a flowchart.
12. (a) Draw the flow-chart for finding greatest of the two numbers.
- Or
- (b) Write down Euclid's method of finding ECD of two numbers.
13. (a) Differentiate interpreter and compiler.
- Or
- (b) Discuss about values in python programming.
14. (a) Write about parameters and arguments.
- Or
- (b) Discuss about modules in python.
15. (a) What do you mean by concatenation?
- Or
- (b) Write about string slices.





PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Discuss about high level languages.

Or

- (b) Write about common keywords used in pseudocode.

17. (a) State the differences between recursion and iteration.

Or

- (b) Write the algorithm to find the greatest of two numbers with flowchart.

18. (a) Discuss about any five data types.

Or

- (b) Write about any five operators.

19. (a) Explain in detail about two basic types of functions.

Or

- (b) Discuss about conditional statements in python.

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20. (a) Give the descriptions and types of method.

Or

- (b) Write about tuples.
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