

Vivekanand College, Kolhapur

Department of Computer Science

NOTICE

Date: 1/072024

All the **Second Year B.Sc. Computer Science** students admitted from other colleges are hereby informed that a **Bridge Course in Python Programming** has been arranged to strengthen the fundamental knowledge in programming.

The course will be conducted as per the following schedule:

- **Time:**
 - Morning Session: **11.30 a.m. to 1.30 p.m.**
 - Afternoon Session: **2.30 p.m. to 4.00 p.m.**
- **Duration:** 10 Days (8th July 2024 to 19th July 2024)
- **Venue:** Computer Science Laboratory

All the concerned students are informed to attend the sessions without fail.




Head of Department
HEAD
DEPARTMENT OF COMPUTER SCIENCE
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Shri Swami Vivekanand College, Kolhapur

Vivekanand College, Kolhapur

(An Empowered Autonomous Institute)

Department of Computer Science

10-Day Bridge Course in Python Programming

Objectives of the Bridge Course

1. To bridge the knowledge gap between school-level computing and undergraduate-level programming.
2. To provide fundamental understanding of Python programming concepts such as variables, operators, control flow, data structures, and functions.
3. To develop logical and problem-solving skills through simple Python programs.
4. To familiarize students with programming tools (IDLE, Jupyter, VS Code) and basic coding practices.
5. To enhance confidence in programming by engaging students in hands-on practice and small projects.
6. To prepare students for advanced courses in Computer Science, Artificial Intelligence, Data Science, and Web Development.
7. To encourage self-learning and curiosity in exploring new technologies through Python.

Outcome of the Course:

By the end of this 10-day bridge course, students will:

- Understand fundamental concepts of Python programming
- Develop problem-solving skills using Python
- Be prepared for advanced programming and data science courses

Day-wise Syllabus

Day 1: Introduction to Python

- Overview of Python: Features & Applications



- Installing Python & IDEs (IDLE / Jupyter / VS Code)
- Writing first Python program (Hello World)
- Understanding Interpreter vs Compiler

Day 2: Basics of Python Programming

- Structure of a Python Program
- Variables, Data Types (int, float, str, bool)
- Constants and Keywords
- Input and Output in Python (input(), print())

Day 3: Operators & Expressions

- Arithmetic, Relational, Logical, Assignment, Membership & Identity Operators
- Type Conversion and Type Casting
- Operator Precedence

Day 4: Control Flow - Decision Making

- Indentation in Python
- if, if-else, if-elif-else
- Nested Decision Making

Day 5: Control Flow - Loops

- for loop and while loop
- range() function
- Nested Loops
- Loop Control Statements (break, continue, pass)

Day 6: Strings in Python

- Creating and Accessing Strings
- String Functions & Methods



- String Slicing and Indexing
- Basic String Programs

Day 7: Lists & Tuples

- Introduction to Lists
- List Operations and Methods
- Tuples and Their Properties
- Difference between Lists and Tuples

Day 8: Dictionaries & Sets

- Dictionaries: Keys, Values, Operations
- Dictionary Methods
- Sets: Properties, Operations, Methods
- Practical Examples

Day 9: Functions in Python

- Defining and Calling Functions
- Function Arguments (default, keyword, positional)
- Return Statement
- Introduction to Built-in Functions

Day 10: File Handling & Mini Project

- Opening, Reading, Writing Files
- File Handling Modes
- Error Handling Basics (try-except)
- **Mini Project:** (e.g., Student Marks Calculator, Simple Library System, Basic Quiz Program)



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10-Day Bridge Course in Python Programming

Date : 25th July 2024

Marks : 50

Name of the student :

Multiple Choice Questions (Python Bridge Course)

1. Python is a _____.
 - a) Low-level language
 - b) High-level language
 - c) Machine language
 - d) Assembly language
2. Python programs are executed by a/an _____.
 - a) Compiler
 - b) Assembler
 - c) Interpreter
 - d) Translator
3. Which function is used to take input from the user in Python?
 - a) scanf()
 - b) cin>>
 - c) input()
 - d) read()
4. The keyword used to define a variable in Python is:
 - a) var
 - b) int
 - c) declare
 - d) None
5. Which of the following is a logical operator in Python?
 - a) &&
 - b) ||
 - c) and
 - d) +

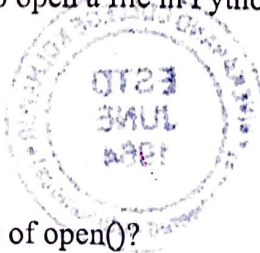


6. The output of `5 ** 2` will be:
- a) 10
 - b) 25
 - c) 7
 - d) 52
7. In Python, indentation is used to:
- a) End a program
 - b) Define blocks of code
 - c) Start a function
 - d) Comment a line
8. Which statement is correct?
- a) `if (x > y) then:`
 - b) `if x > y:`
 - c) `if x > y then`
 - d) `if (x > y) { }`
9. Which function generates a sequence of numbers in Python?
- a) `seq()`
 - b) `range()`
 - c) `list()`
 - d) `sequence()`
10. The keyword used to skip the current iteration in a loop is:
- a) `exit`
 - b) `break`
 - c) `continue`
 - d) `skip`
11. Which of the following creates a string in Python?
- a) `"Hello"`
 - b) `Hello`
 - c) `str(Hello)`
 - d) `{Hello}`
12. What will be the output of `"Python"[2]`?
- a) t
 - b) y
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13. Lists in Python are:
- a) Immutable
 - b) Mutable
 - c) Constants
 - d) Unordered



14. Which symbol is used to define a tuple?
- a) []
 - b) {}
 - c) ()
 - d) <>
15. A dictionary in Python stores data in:
- a) Key-value pairs
 - b) Sequential order
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- a) getkeys()
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- a) def
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18. What will be the output of:
- ```
def add(x, y=2):
 return x + y

print(add(3))
```
- a) 2
  - b) 3
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19. Which function is used to open a file in Python?
- a) file()
  - b) open()
  - c) fopen()
  - d) read()
20. What is the default mode of open()?
- a) r
  - b) w
  - c) a
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21. Which symbol is used for single-line comments in Python?

- a) //
- b) <!-- -->
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22. Which of the following is a valid variable name?

- a) lvalue
- b) value\_1
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23. What will be the output of:

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print(type(3.14))
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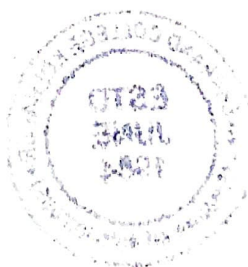
- a) <class 'int'>
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24. What will len("Vivekanand") return?

- a) 9
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25. Python was developed by:

- a) Dennis Ritchie
- b) James Gosling
- c) Guido van Rossum
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# Vivekanand College, Kolhapur

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## 10-Day Bridge Course in Python Programming

| Sr.No | Name                 | 8/7             | 9/7             | 10/7            | 11/7            | 12/7            | 13/7            | 15/7            | 16/7            | 18/7       | 19/7            |
|-------|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------|-----------------|
| 1     | Shreya Rahul Hatgine | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u>      | <u>SPH</u> | <u>SPH</u>      |
| 2     | Snehal Uttam Misal   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | <u>Smisal</u>   | AB         | <u>Smisal</u>   |
| 3     | Sahil Samir Dongare  | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | <u>SDongare</u> | AB         | <u>SDongare</u> |
| 4     | Pravin Bajirao Patil | AB              | AB              | AB              | AB              | AB              | AB              | AB              | AB              | AB         | AB              |



  
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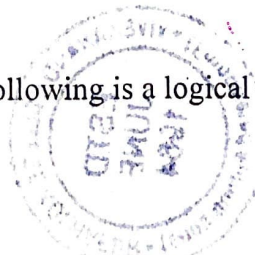
Date : 25<sup>th</sup> July 2024

Marks : 50

Name of the student : Shreya Rahul Hatgine

### Multiple Choice Questions (Python Bridge Course)

- ✓ 1. Python is a b.
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- ✓ 4. The keyword used to define a variable in Python is:
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  - d) None
- ✓ 5. Which of the following is a logical operator in Python?
  - a) &&
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- a) if ( $x > y$ ) then:
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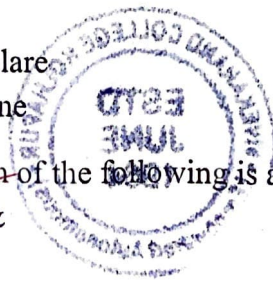
Date : 25<sup>th</sup> July 2024

Marks : 50

Name of the student : Snehal uttam mishra

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Department of Computer Science

## 10-Day Bridge Course in Python Programming

Date : 25<sup>th</sup> July 2024

Marks : 50

Name of the student : Sahil Samir Dongare

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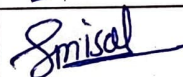
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Department of Computer Science

10-Day Bridge Course in Python Programming

## Examination Attendance

Date : 25<sup>th</sup> July 2024

| Sr.No. | Name                 | Signature                                                                           |
|--------|----------------------|-------------------------------------------------------------------------------------|
| 1      | Shreya Rahul Hatgine |  |
| 2      | Snehal Uttam Misal   |  |
| 3      | Sahil Samir Dongare  |  |
| 4      | Pravin Bajirao Patil | AB                                                                                  |



  
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## Result

Date : 26<sup>th</sup> July 2024

| Sr.No. | Name                 | Marks |
|--------|----------------------|-------|
| 1      | Shreya Rahul Hatgine | 32    |
| 2      | Snehal Uttam Misal   | 28    |
| 3      | Sahil Samir Dongare  | 24    |
| 4      | Pravin Bajirao Patil | Ab    |



  
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