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| | Atal Bihari Vajpayee Govt Institute of Engineering & Technology |
| | **DEPARTMENT OF COMPUTER ENGINEERING** |
| | LESSON PLAN (Theory Course) |

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| Program Name | **Diploma in Computer Engineering** | Academic Year | **Jan. - Jun. 2026** |
| Course Title | **Scripting Language** | Scheme | **N - 2022** |
| Course Code | **COPC - 302** | Semester | **6th** |
| Course Type | **Program Core** | Semester Start Date | **27-01-2026** |
| Course Teacher | **Rajesh Kumar** | Semester End Date | **27-05-2026** |

## EVALUATION SCHEME

| Study Hours | | | Internal Assessment Marks | External Assessment | | Total Marks | No. of Credits |
|---|---|---|---|---|---|---|---|
| L | DCS | Total | | Marks | Duration | | |
| **02 Hrs.** | **03 Hr.** | **05 Hrs.** | **40** | **60** | **3 Hrs.** | **100** | **02** |

## REFERENCE BOOKS / STUDY MATERIAL

1. Computer Science text book for class XI, NCERT.
2. Python Programming Using Problem Solving Approach by Reema Thareja, Oxford University Press.
3. Introduction to Computer Science using Python by Charles Dierbach, Wiley Publishers.
4. Let's Python by Yashavant Kanetkar, BPB publication.
5. The Complete Reference Python by Martin C. Brown, Mc Graw Hill publication.

## COURSE OUTCOMES(COs)

| On the successful completion of this course, students will be able to:- | |
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| CO1 | Write and execute simple 'Python' programs. |
| CO2 | Write 'Python' programs using arithmetic expressions and control structure. |
| CO3 | Develop "Python' programs using List, Tuple, Set and Dictionary. |
| CO4 | Develop/Use functions in Python programs for modular programming approach. |
| CO5 | Develop 'Python' programs using File Input/output operations. |

## TEACHING PLAN

| Unit No. | Topic to be Covered | Proposed Date (as per Time Table) | Actual date | Remark(s) |
|---|---|---|---|---|
| 1 | Introduction to Scripting Language | 27/01/2026 | | **Unit - 1** |
| 2 | Introduction to Python Programming | 28/01/2026 | | |
| 3 | – do – | 29/01/2026 | | |
| 4 | Python 2 Vs Python 3 | 31/01/2026 | | |
| 5 | Execution process of a Python program | 02/02/2026 | | |
| 6 | Features of Python | 03/02/2026 | | |
| 7 | Application areas of Python | 04/02/2026 | | |
| 8 | Execution modes of Python - interactive mode and script mode; Code indentation; Comments; Python statements - simple and compound | 05/02/2026 | | |
| 9 | Python tokens - identifiers, keywords, operators, delimiters, and literals | 07/02/2026 | | |
| 10 | Variables naming conventions, Need of input and output statements | 09/02/2026 | | |

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| 11 | Reading from standard input using the input() function; Writing to standard output using the print() function, Escape sequences | 10/02/2026 | | |
| 12 | Data Types: Numbers - integer, floating point and complex | 11/02/2026 | | **Unit - 2** |
| 13 | – do – | 12/02/2026 | | |
| 14 | Sequences - strings, lists and tuples | 16/02/2026 | | |
| 15 | – do – | 17/02/2026 | | |
| 16 | – do – | 18/02/2026 | | |
| 17 | – do – | 19/02/2026 | | |
| 18 | Sets | 21/02/2026 | | |
| 19 | – do – | 23/02/2026 | | |
| 20 | Mappings - dictionaries | 24/02/2026 | | |
| 21 | – do – | 25/02/2026 | | |
| 22 | Mutable and Immutable data types | 26/02/2026 | | |
| 23 | Type conversion - Explicit and implicit conversion. | 28/02/2026 | | |
| 24 | Need of Operators, Arithmetic operators | 02/03/2026 | | **Unit - 3** |
| 25 | Relational operators | 03/03/2026 | | |
| 26 | Assignment Operators | 05/03/2026 | | |
| 27 | Logical Operators | 07/03/2026 | | |
| 28 | Bitwise operators | 09/03/2026 | | |
| 29 | – do – | 10/03/2026 | | |
| 30 | Identity operators and membership operators | 11/03/2026 | | |
| 31 | Precedence and associativity of operators | 12/03/2026 | | |
| 32 | Class Test - 1 | 2nd week of March | | |
| 33 | Arithmetic expressions | 17/03/2026 | | |
| 34 | Revision of Unit 3 | 18/03/2026 | | |
| 35 | Operations on sequences - concatenation, repetition, membership testing, indexing, slicing | 19/03/2026 | | **Unit - 4** |
| 36 | – do – | 23/03/2026 | | |
| 37 | – do – | 24/03/2026 | | |
| 38 | – do – | 25/03/2026 | | |
| 39 | String methods - capitalize(), lower(), upper(), title(), count(), find(), replace() | 28/03/2026 | | |
| 40 | List methods - count(), index(), append(), insert(), remove(), pop(), reverse(), sort(), clear(), Tuple methods - count(), index() | 30/03/2026 | | |
| 41 | – do – | 31/03/2026 | | |
| 42 | Set methods - add(), clear(), remove(), discard(), intersection(), difference(), union(), pop() | 01/04/2026 | | |
| 43 | Dictionary methods - keys(), values(), items(), clear(), pop() | 02/04/2026 | | |
| 44 | Conditional statements - The if statement and its variants - if, if...else, if...elif...else | 04/04/2026 | | **Unit - 5** |
| 45 | – do – | 06/04/2026 | | |
| 46 | Comparison chaining | 07/04/2026 | | |
| 47 | Loop statements - while, for | 08/04/2026 | | |
| 48 | – do – | 09/04/2026 | | |
| 49 | Use of else in loops | 13/04/2026 | | |
| 50 | Jump statements - break, continue, pass | 16/04/2026 | | |
| 51 | The range() function | 18/04/2026 | | |
| 52 | Comprehension - list, set and dictionary | 20/04/2026 | | |
| 53 | – do – | 21/04/2026 | | |
| 54 | Class Test - 2 | 2nd week of April | | |
| 55 | Python modules and packages | 23/04/2026 | | **Unit - 6** |
| 56 | Exception handling in Python | 25/04/2026 | | |

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| 57 | – do – | 27/04/2026 | | |
| 58 | Advantages of functions | 28/04/2026 | | **Unit - 7** |
| 59 | User defined functions - function definition, function call, return values | 29/04/2026 | | |
| 60 | Parameter passing | 30/04/2026 | | |
| 61 | – do – | 02/05/2026 | | |
| 62 | Keyword and default arguments | 04/05/2026 | | |
| 63 | Centralized House Test | (2nd week of May) | | |
| 64 | | | | |
| 65 | | | | |
| 66 | | | | |
| 67 | Keyword and default arguments | 05/05/2026 | | |
| 68 | Variable scope and lifetime - local and global variables | 06/05/2026 | | |
| 69 | – do – | 07/05/2026 | | |
| 70 | Lambda functions | 16/05/2026 | | |
| 71 | Revision of Unit - 7 | 18/05/2026 | | |
| 72 | Need of Files, File opening modes | 19/05/2026 | | **Unit - 8** |
| 73 | Python methods for reading, writing and moving within a file - read(), readline(), readlines() | 20/05/2026 | | |
| 74 | Methods: write(), writelines(), truncate(), flush() | 21/05/2026 | | |
| 75 | Methods: seek(), tell(), Use of with keyword | 23/05/2026 | | |
| 76 | Revision of Unit - 8 | 25/05/2026 | | |
| 77 | Revision of Units - 1 and 2 | 26/05/2026 | | |

**HOME ASSIGNMENTS**

| Sr. No. | Syllabus | Proposed Issue Date | Actual Issue Date | Submission & Test Date | Remark(s) |
|---|---|---|---|---|---|
| 1 | Unit - 1 & 2 | 23/02/2026 | | 02/03/2026 | |
| 2 | Unit - 3, 4 & 5 | 23/03/2026 | | 30/03/2026 | |
| 3 | Unit - 6,7 & 8 | 27/04/2026 | | 04/05/2026 | |
| 4 | Combined | 18/05/2026 | | 22/05/2026 | Special, if Required |

**CLASS TEST / HOUSE TEST**

| Test Name | Syllabus (Unit / Chapter Wise) | Proposed Date | Actual date | Remark(s) |
|---|---|---|---|---|
| Class Test - 1 (CT - 1) | Unit - 1 & 2 | 2nd Week of March | | |
| Special Class Test - 1 | | Within 10 days of CT - 1 | | |
| Class Test - 2 (CT -2) | Unit - 3 & 4 | 2nd Week of April | | |
| Special Class Test - 2 | | Within 10 days of CT - 2 | | |
| House Test (HT) | Unit - 1 to 6 | 2nd Week of May (Centralized) | | |
| Special House Test | | Within a week after HT | | |

**Faculty Signature:** _____
**Faculty Name**: Rajesh Kumar

Approved By:

**HoD Signature:** _____
**HoD Name:** Sandeep Khimta