

Govt. Polytechnic Sundernagar
Lesson Plan (Theory)

Branch **Computer Engg**
Subject **Elective II (Python Programming)**
Teacher **Komal Chaudhary**

Semester **6th**

Sr. No.	No of lectures	Chapter	Detailed Content	Resource	Remarks	Signature
1	6	Introduction to Python	Python language need, features and advantages; Python versions, structure of a typical Python program, code indentation, application areas of Python.	R1, R2		
2	10	Basics of Python Language	Python tokens identifiers, keywords, operators, delimiters, and literals; variables, naming conventions in Python, Python statements simple and compound; comments, reading from standard input using input(), writing to standard output using print(), Data types numbers, strings, tuples, lists, dictionaries, ranges, and sets; mutable and immutable data types, Python numbers: integers, floating point and complex numbers; numeric literals; String literals quoted and triple quoted strings, multiline strings, escape sequence, type() function.	R1, R2		
3	10	Python Data Structures	Sequence types list, tuple, range, string; dictionary, set, list comprehension, set comprehension, dictionary comprehension. String methods capitalize(), count(), find(), format(), replace(), lower(), upper(), title(); List methods count(), index(), append(), insert(), remove(), pop(), reverse(), sort(); Set methods add(), clear(), remove(), discard(), intersect(), copy(), difference(), union(); Dictionary methods keys(), values(), pop(), items(), clear().	R1, R2		

4	10	Operators and Expressions	Arithmetic operators addition, subtraction, multiplication, division, truncated division, modulus, exponentiation; arithmetic expressions, comparison operators, logical operators, comparison chaining, bitwise operators, operations on sequences concatenation, repetition, membership testing, indexing, slicing.	R1, R2		
5	10	Flow Control	If statement and its variants if, if...else, if...elif...else; loops while, for; use of else in loops, jump statements break, continue, pass; with statement, exception handling.	R1, R2		
6	10	Modules, Packages and Functions	Python modules and packages, functions, def statement, parameters, named parameters, default values of parameters, function signatures, variable number of arguments, return statement, lambda expression.	R1, R2		
7	10	Handling Files in Python	Opening a file, file opening modes, read from a file read(), readline(); writing to a file write(), writelines(), truncate(), flush(); navigating in a file seek(), tell(), use of with statement	R1, R2		

R1 "Introduction to computer Science using Python "By Charles Dierbach , Willey Publishers

R2 "Python in Nutshell" by Alex Martelli et al, O'reilly Media



Subject Teacher

(Komal Chaudhary)

Approved


H.O.D