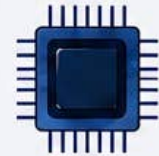
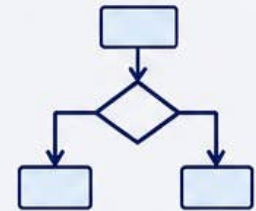




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Syllabus



Minor Course: Laboratory on Advanced python Programming

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	112266	Laboratory on Advanced python Programming	2	60	4Hrs.	50

Course Objectives:	1. To develop basic programming skills using Python language. 2. To understand and apply Python data structures such as lists, tuples and dictionaries. 3. To perform string processing, pattern generation, mathematical computation and recursion-based problem solving. 4. To apply dictionary operations for mapping, counting and grouping data. 5. To understand basic file handling operations such as reading and processing file contents. 6. To introduce object-oriented programming concepts such as class, object and constructor through simple Python programs. 7. To improve logical thinking, problem-solving ability and practical programming confidence among students.						
Course Outcomes:	On completion of the following syllabus the students will be able to – 1. Write simple Python programs using variables, operators, control statements and loops. 2. Apply string, list, tuple and dictionary operations to solve basic programming problems. 3. Develop Python programs using functions and recursion for mathematical and logical problems. 4. Analyse problems involving mapping, counting, grouping and searching of data using dictionaries. 5. Implement basic file handling programs to read, process and display file contents. 6. Create simple object-oriented Python programs using classes, objects and constructors.						
Contents					Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies
	List of Practical: 1. Write a Python program to create, append and remove lists. 2. Python program to check if a substring is present in a given string. 3. Write a program to demonstrate working with tuples in Python. 4. Write a program to demonstrate working with dictionaries in Python. 5. Write a Python program to find largest of three numbers. 6. Write a Python program to construct the following pattern using nested for loop. *						Use any pedagogical technique suitable for the topic

	* * * * * * * * * 7. Write a Python program to print prime numbers less than 20. 8. Write a Python program to find factorial of a number using recursion. 9. Write a Python program to map two lists into a dictionary. 10. Write a Python program to count the frequency of words appearing in a string using a dictionary. 11. Write a Python program to create a dictionary with key as first character and value as words starting with that character. 12. Write a Python program to read the contents of a file in reverse order. 13. Write a Python program to perform union, intersection, difference and symmetric difference on two sets. 14. Write a Python Program to demonstrate the class and object. 15. Write a Python Program to demonstrate constructor method.			
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Assessment Rubric: External Practical Course

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI PRACTICAL EXAMINATION B.Sc. III, SEMESTER – V (NEP)				
Practical	Course Code: 112266	Laboratory on Advanced python Programming	Max Marks: 25	Time: 4 Hrs.
Q. No.	Exercise			Marks
1.	Single Program Writing, Algorithm, Flowchart, Execution, with Sample inputs and Outputs, and Printout			10
2.	Submitted Record book (Preferably handwritten)			05
3.	External Viva Voce			10

Assessment Rubric: Internal Practical Course

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI PRACTICAL EXAMINATION B.Sc. III, SEMESTER – V (NEP)			
Practical	Course Code: 112266	Laboratory on Advanced python Programming	Max Marks: 25
Q. No.	Assessment Criteria		Marks
1.	Attendance/Regularity in practical's / Students' overall performance		05
2.	Record book Preparation (Preferably handwritten)		10
3.	Internal Viva Voce		10