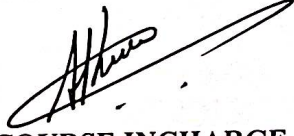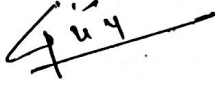# K S INSTITUTE OF TECHNOLOGY BANGALORE

DEPARTMENT OF MECHANICAL ENGINEERING

COURSE FILE

NAME OF THE STAFF : Mr.ANILKUMAR A

SUBJECT CODE/NAME :BPLCK105B/INTRODUCTION TO PYTHON PROGRAMMING

SEMESTER/YEAR : I/ H-Sec

ACADEMIC YEAR : 2023-2024 (ODD)

BRANCH : COMPUTER SCIENCE & ENGINEERING (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

COURSE INCHARGE

HOD

K S INSTITUTE OF TECHNOLOGY BANGALORE

MECHANICAL ENGINEERING DEPARTMENT

Course files contents – Beginning of Semester

SL NO	Name of the Item
1	Front Page
2	Vision, Mission of Institute and Department
3	PEO's, PSO's and PO's
4	CO PO,PSO Mapping
5	Calendar of Events of Department & College
6	Student Details
7	Individual and class Time Table
8	Syllabus
9	Lesson Plan
10	Assignment Questions with Scheme
11	IA question Paper with Scheme (both sets)
12	All IA marks and final AVG marks
13	Slow Learners: Tutorial classes conducted proof
14	Advance Learners: Challenging questions, Question papers from other regional universities, IIT, NIT, Competitive Exam Question Papers - GATE/IES, Mini projects etc.
15	Pedagogy Report and Proofs (Proof of usage of ICT Tools)
16	Content beyond syllabus Material (if any)
17	Question Bank for each Module
18	Previous year VTU Question papers, Scheme for evaluation
19	Course end Survey
20	CO PO attainment

K. S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109

VISION

"To impart quality technical education with ethical values, employable skills and research to achieve excellence"

MISSION

- To attract and retain highly qualified, experienced & committed faculty.
- To create relevant infrastructure
- Network with industry & premier institutions to encourage emergence of new ideas by providing research & development facilities to strive for academic excellence
- To inculcate the professional & ethical values among young students with employable skills & knowledge acquired to transform the society

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Vision

- To create competent professionals in Computer Science and Engineering with adequate skills to drive the IT industry

Mission

- Impart sound technical knowledge and quest for continuous learning.
- To equip students to furnish Computer Applications for the society through experiential learning and research with professional ethics.
- Encourage team work through inter-disciplinary project and evolve as leaders with social concerns.

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DEPARTMENT OF MECHANICAL ENGINEERING

PROGRAM OUTCOMES(PO's)

Engineering Graduates will be able to:

PO1: **Engineering knowledge:** Apply the knowledge of mathematics, science, engineeringfundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: **Problem analysis:** Identify, formulate, review research literature, and analyze complexengineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: **Design/development of solutions:** Design solutions for complex engineering problems anddesign system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: **Conduct investigations of complex problems:** Use research-based knowledge and researchmethods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modernengineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: **The engineer and society:** Apply reasoning informed by the contextual knowledge to assesssocietal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: **Environment and sustainability:** Understand the impact of the professional engineering solutionsin societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms ofthe engineering practice.

PO9: **Individual and team work:** Function effectively as an individual, and as a member or leader indiverse teams, and in multidisciplinary settings.

PO10: **Communication:** Communicate effectively on complex engineering activities with the engineeringcommunity and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: **Project management and finance:** Demonstrate knowledge and understanding of theengineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: **Life-long learning:** Recognize the need for, and have the preparation and ability to engage inindependent and life-long learning in the broadest context of technological change.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Excel in professional career by acquiring knowledge in cutting edge Technology and contribute to the society as an excellent employee or as an entrepreneur in the field of Computer Science & Engineering.

PEO2: Continuously enhance their knowledge on par with the development in IT industry and pursue higher studies in computer science &engineering.

PEO3: Exhibit professionalism, cultural awareness, team work, ethics, and effective communication skills with their knowledge in solving social and environmental problems by applying computer technology.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Ability to understand, analyze problems and implement solutions in Programming languages, as well to apply concepts in core areas of Computer Science in association with professional bodies and clubs.

PSO2: Ability to use computational skills and apply software knowledge to develop effective solutions and data to address real world challenges.

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DEPARTMENT OF MECHANICAL ENGINEERING

CO-PO MAPPING WITH JUSTIFICATION

Course: Introduction to Python Programming	Course Code: BPLCK105B	Type: Integrated Course
Course Incharge: Anilkumar A	Academic year: 2023-2024	
Sem / Section: I / H	Branch: Computer Science & Engineering (IoT and Cyber security including Block chain Technology)	

No of Hours per week			
Theory (Lecture Class)	Practical/Field Work/Allied Activities	Total/Week	Total teaching hours
L+T+P+S:2+2+2+0 L –Lecture, T – Tutorial, P- Practical/ Drawing, S – Self Study Component	40+12 lab	6	58

Marks			
Internal Assessment	Examination	Total	Credits
50	50	100	3

Aim/Objective of the Course:

This Course will enable students to:

1. Learn the syntax and semantics of the Python programming language.
2. Illustrate the process of structuring the data using lists, tuples
3. Appraise the need for working with various documents like Excel, PDF, Word and Others.
4. Demonstrate the use of built-in functions to navigate the file system.
5. 5. Implement the Object-Oriented Programming concepts in Python.

Course Learning Outcomes: After completing the course, the students will be able to,		Bloom's Level
BPLCK105.1	Utilize the basic principles python programming to define variable, Boolean expressions, flow control and comparison operators	Applying (K3)
BPLCK105.2	Select and define suitable functions, local and global variables with exception handling. To define lists, tuples and its basic operations	Applying (K3)
BPLCK105.3	Make use of Strings, Dictionaries, and Useful String Methods and to read and write files.	Applying (K3)
BPLCK105.4	Make use of the concept of Walking a Directory Tree, Compressing Files with the zip file and raising Exceptions	Applying (K3)
BPLCK105.5	Make use of Object-oriented features, Programmer-defined types, time, Pure functions.	Applying (K3)

Syllabus Content:	COs, POs and PSOs mapping

Module 1: Python Basics: Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program, **Flow control:** Boolean Values, Comparison Operators, Boolean Operators, Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules, Ending a Program Early with sys.exit(), **Functions:** def Statements with Parameters, Return Values and return Statements, The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number
 	
Module 1: Laboratory Experiment
a. Develop a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages
b. Develop a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.
LO: At the end of this session the student will be able to,
  1. Define variables
  2. Write the first program in python
  3. Use comparison operators
	CO1 and CO2
	
	10hrs
	
	PO1-3
	PO2-2
	PO3-2
	PO5-1
	PO6-1
	PO8-1
	PO9-1
	PO10-2
	PO12-1
	PSO1-2
	PSO2-1

Module 2:
 	
Lists: The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples, References,
 	
Module 2: Laboratory Experiment
a. Develop a program to generate Fibonacci sequence of length (N). Read N from the console.
b. Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).
LO: At the end of this session the student will be able to,
  1. Write List data types, and tuples.
  2. Write the program of Magic 8 ball with List
  3. To model structure to real world
	CO2
	
	15hrs.
	
	PO1-3
	PO2-2
	PO3-2
	PO5-1
	PO6-1
	PO8-1
	PO9-1
	PO10-2
	PO12-1
	PSO1-2
	PSO2-1

Module 3:
 	
Dictionaries and Structuring Data: The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things
 	
Manipulating Strings: Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Mark up
 	
Reading and Writing Files: Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module, Saving Variables with the print.format() Function, Project: Generating Random Quiz Files, Project: Multiclipboard
 	
Module 3: Laboratory Experiment
a. Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable messages.
b. Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.
 	
LO: At the end of this session the student will be able to,
   1. Write a useful string and do simple project
   2. Explain the files and files paths, reading /writing process.
	CO3
	
	14hrs
	
	PO1-3
	PO2-2
	PO3-3
	PO5-1
	PO6-1
	PO8-1
	PO9-1
	PO10-2
	PO12-1
	PSO1-3
	PSO2-1

Module 4: **Organizing Files:** The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates, Project: Backing Up a Folder into a ZIP File,
 	
Debugging: Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE"s Debugger.
 	
Module 4: Laboratory Experiment
a) Develop a program to print 10 most frequently appearing words in a text file. [Hint: Use dictionary with distinct words and their frequency of occurrences. Sort the dictionary in the reverse order of frequency and display dictionary slice of first 10 items]
b) Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Hint: Use string methods strip (), len (), list methods sort (), append (), and file methods open (), readlines (), and write ()].
c) Develop a program to backing Up a given Folder (Folder in a current working directory) into a ZIP File by using relevant modules and suitable methods.
d) Write a function named DivExp which takes TWO parameters a, b and returns a value c (c=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0. Develop a suitable program which reads two values from the console and calls a function DivExp.
 	
LO: At the end of this session the student will be able to,
   1. Write a walking a Directory Tree
   2. Able to rename files with American style dates to European style
   3. Handling the exceptions and trace back
	CO4
	
	11hrs
	
	PO1-3
	PO2-3
	PO3-3
	PO5-1
	PO6-1
	PO8-1
	PO9-1
	PO10-2
	PO12-1
	PSO1-3
	PSO2-1

Module5: **Classes and objects:** Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying,
 	
Classes and functions: Time, Pure functions, Modifiers, Prototyping versus planning,
 	
Classes and methods: Object-oriented features, Printing objects, Another example, A more complicated example, The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,
 	
Module 5: Laboratory Experiment
 	
a. Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.
 	
b. Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint: Use list to store the marks in three subjects and total marks. Use __init__() method to initialize name, USN and the lists to store marks and total, Use getMarks() method to read marks into the list, and display() method to display the score card details.]
LO: At the end of this session the student will be able to,
   1. Able to write programmer defined classes and objects, Attributes etc.
   2. Able to do prototyping and planning
	CO5
	
	5hrs
	
	PO1-3
	PO2-3
	PO3-3
	PO5-1
	PO6-1
	PO8-1
	PO9-1
	PO10-2
	PO12-1
	PSO1-3
	PSO2-1

Text Books: -
1. Al Sweigart,"**Automate the Boring Stuff with Python**",1stEdition, No Starch Press, 2015. (Available under CC-BY-NC-SA license at https://automatetheboringstuff.com/) (Chapters 1 to 18, except 12) for lambda functions use this link: https://www.learnbyexample.org/python-lambda-function/
2. Allen B. Downey, "**Think Python: How to Think Like a Computer Scientist**", 2nd Edition, Green Tea Press, 2015. (Available under CC-BY-NC license http://greenteapress.com/thinkpython2/thinkpython2.pdf

Reference Books:
- **The Python Language Reference Manual** (version 3.2), Guido van Rossum, and Fred L. Drake, Jr. (Editor), ISBN: 1906966141, Network Theory Ltd, 120 pages (Revised November 2006)
- **Python Essential Reference,** David Beazley, ISBN: 0672329786, Addison-Wesley Professional; 717 pages (July, 2009)

Useful websites:
- https://www.learnbyexample.org/python/
- https://www.learnpython.org/
- https://pythontutor.com/visualize.html#mode=edit
- https://www.w3schools.com/python/python_intro.asp

Useful Journals:
- Programming Language Trends - O'Reilly Radar". Radar.oreilly.com
- "The RedMonk Programming Language Rankings: tecosystems". Redmonk.com.
- Kuhlman, Dave. "A Python Book: Beginning Python, Advanced Python, and Python Exercises"
- Downey A, Elkner J and Meyers C 2008 "'How to think like Computer Scientist` Learning with Python"

Teaching and Learning Methods:
1. Lecture class
2. Self-study
3. Field visits/Group Discussions/Seminars

Type of test/examination (For 2022 scheme)

Type of test/examination: Written examination
Continuous Internal Evaluation (CIE): 50 marks (Average of two CIE will be considered)
Semester End Exam (SEE): 50marks (students have to answer all main questions)
Test duration: 1 hr
Examination duration: 3 hrs

CO - PO MAPPING

PO1: Science and engineering Knowledge	**PO7:** Environment and Sustainability
PO2: Problem Analysis	**PO8:** Ethics
PO3: Design & Development	**PO9:** Individual & Team Work
PO4: Investigations of Complex Problems	**PO10:** Communication
PO5: Modern Tool Usage	**PO11:** Project Management & Finance
PO6: Engineer & Society	**PO12:** Life long Learning

PSO1: Graduates will demonstrate the technical skills to address real-world challenges in IoT, cyber security, and block chain technology while upholding ethical considerations and social responsibility.

PSO2: Graduates will engage in continuous learning, collaborate cross-functionally, and adeptly create and implement inventive solutions for societal benefit while ensuring digital security and privacy.

CO BPLCK105	Bloom's Level	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
BPLCK105.1	K4	3	2	2	-	1	1	-	1	1	2	-	1	2	1
BPLCK105.2	K4	3	2	2	-	1	1	-	1	1	2	-	1	2	1
BPLCK105.3	K3	3	2	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105.4	K4	3	3	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105.5	K3	3	3	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105 (Before CBS)		3	2.4	2.6	-	1	1	-	1	1	2		1	2.6	1
Content Beyond Syllabus (Activity)		-	-	-	-	2	-	-	-	2	2	-	2	-	-
BPLCK105		3	2.4	2.6	-	2	-	-	-	2	2	-	2	2.6	2

CO-PO MAPPING Justification Table

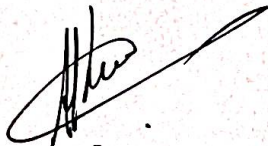| Sl. No.	CO	PO	Number Of Key Elements of PO Mapped To CO	Justification
CO1 Utilize the basic principles python programming to define variable, Boolean expressions, flow control and comparison operators				
1.		1	The students will able to gain • Knowledge Of Python syntax and semantics • Knowledge of using flow control statements in writing a program	3
2.		2	The students will able to • Identify • Formulate • Analyse Complex Engineering Problems	2
3.		3	The students will able to • Design and implementation is required to write the program for the given problem statement.	2
4		5	The students will able to • Moderately mapped as students learn modern tools (Mu editor) to execute python programs / applications	2
5		6	The students will able to work effectively in teams to conduct mini project as (using Python code) • Individual • In a Team	1
6	CO1	8	The students will able to Communicate effectively by • Write Effective programs • Effective code optimization	1
7		9	The students will able to gain the knowledge and understand • Programming skills	1
8		10	The students will able to engage in knowledge upgradation through • Independent learning • Lifelong learning	2
9		12	The student will be able to • Apply the concepts programming skill set in professional development	1
10		PSO1	The students will able to understand the fundamentals of programming in • Image processing • Forecasting • Data Analysis	2
11		PSO2	The students will able to gain the ability to • Develop a program needed for societal concern • Development of web based applications	1
CO2 Select and define **suitable** functions, local and global variables with exception handling. To define lists, tuples and Dictionaries data types and its basic operations				
12	CO2	1	The students will able to gain • Knowledge Of Python syntax and semantics • Knowledge of using flow control statements in writing a program	3
13		2	The students will able to • Identify • Formulate	2

			• Analyse Complex Engineering Problems	
14		3	The students will able to • Design and implementation is required to write the program for the given problem statement.	2
15		5	The students will able to • Moderately mapped as students learn modern tools (Mu editor) to execute python programs / applications	2
16		6	The students will able to work effectively in teams to conduct mini project as (using Python code) • Individual • In a Team	1
17		8	The students will able to Communicate effectively by • Write Effective programs • Effective code optimization	1
18		9	The students will able to gain the knowledge and understand • Programming skills	1
19		10	The students will able to engage in knowledge upgradation through • Independent learning • Lifelong learning	2
20		12	The student will be able to • Apply the concepts programming skill set in professional development	1
21		PSO1	The students will able to understand the fundamentals of programming in • Image processing • Forecasting • Data Analysis	2
22		PSO2	The students will able to gain the ability to • Develop a program needed for societal concern Development of web based applications	1
	CO3:		Make use of Strings, Dictionaries, and Useful String Methods and to read and write files.	
23		1	The students will able to gain • Knowledge Of Python syntax and semantics • Knowledge of using flow control statements in writing a program	3
24		2	The students will able to • Identify • Formulate • Analyse Complex Engineering Problems	2
25	CO3	3	The students will able to • Design and implementation is required to write the program for the given problem statement.	2
26		5	The students will able to • Moderately mapped as students learn modern tools (Mu editor) to execute python programs / applications	2
27		6	The students will able to work effectively in teams to conduct mini project as (using Python code) • Individual • In a Team	1

28	8	The students will able to Communicate effectively by • Write Effective programs • Effective code optimization	1
29	9	The students will able to gain the knowledge and understand • Programming skills	1
30	10	The students will able to engage in knowledge upgradation through • Independent learning • Lifelong learning	2
31	12	The student will be able to • Apply the concepts programming skill set in professional development	1
32	PSO1	The students will able to understand the fundamentals of programming in • Image processing • Forecasting • Data Analysis	2
33	PSO2	The students will able to gain the ability to • Develop a program needed for societal concern • Development of web based applications	1
CO4:		**Make use of** the concept of Walking a Directory Tree, Compressing Files with the zip file and raising Exceptions	
34	1	The students will able to gain • Knowledge Of Python syntax and semantics • Knowledge of using flow control statements in writing a program	3
35	2	The students will able to • Identify • Formulate • Analyse Complex Engineering Problems	2
36	3	The students will able to • Design and implementation is required to write the program for the given problem statement.	2
37	5	The students will able to • Moderately mapped as students learn modern tools (Mu editor) to execute python programs / applications	2
38	6	The students will able to work effectively in teams to conduct mini project as (using Python code) • Individual • In a Team	1
39	8	The students will able to Communicate effectively by • Write Effective programs • Effective code optimization	1
40	9	The students will able to gain the knowledge and understand • Programming skills	1
41	10	The students will able to engage in knowledge upgradation through • Independent learning • Lifelong learning	2
42	12	The student will be able to • Apply the concepts programming skill set in professional development	1
43	PSO1	The students will able to understand the fundamentals of programming in • Image processing • Forecasting • Data Analysis	2

Note: rows 34–43 belong to the **CO4** group.

44		PSO2	The students will able to gain the ability to • Develop a program needed for societal concern • Development of web based applications	1
CO5: Make use of Object-oriented features, Programmer-defined types, time, Pure functions.				
45		1	The students will able to gain • Knowledge Of Python syntax and semantics • Knowledge of using flow control statements in writing a program	3
46		2	The students will able to • Identify • Formulate • Analyse Complex Engineering Problems	2
47		3	The students will able to • Design and implementation is required to write the program for the given problem statement.	2
48		5	The students will able to • Moderately mapped as students learn modern tools (Mu editor) to execute python programs / applications	2
49		6	The students will able to work effectively in teams to conduct mini project as (using Python code) • Individual • In a Team	1
50	CO5	8	The students will able to Communicate effectively by • Write Effective programs • Effective code optimization	1
51		9	The students will able to gain the knowledge and understand • Programming skills	1
52		10	The students will able to engage in knowledge upgradation through • Independent learning • Lifelong learning	2
53		12	The student will be able to • Apply the concepts programming skill set in professional development	1
54		PSO1	The students will able to understand the fundamentals of programming in • Image processing • Forecasting • Data Analysis	2
55		PSO2	The students will able to gain the ability to • Develop a program needed for societal concern • Development of web based applications	1

Sl. No.	Gap Identification	Activity Planned to fill the gap	CO	Relevant PO Mapping
1	PO2, PO5, PO12	Quiz	CO1, CO2, CO3, CO4, CO5	PO2, PO5, PO12

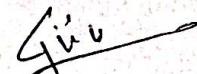## CO PO mapping for the events conducted after gap identification

CO BPLCK105	Bloom's Level	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
BPLCK105.1	K4	3	3	2	-	1	1	-	1	1	2	-	1	2	1
BPLCK105.2	K4	3	3	2	-	1	1	-	1	1	2	-	1	2	1
BPLCK105.3	K3	3	3	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105.4	K4	3	3	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105.5	K3	3	3	3	-	1	1	-	1	1	2	-	1	3	1
BPLCK105 (Before CBS)		3	3	2.6	-	1	1	-	1	1	2		1	2.6	1
Content Beyond Syllabus (Activity)		-	-	-	-	2	-	-	-	2	2	-	2	-	-
BPLCK105B		3	3	2.6	-	2	-	-	-	2	2	-	2	2.6	2

Signature of Course In-charge   Signature of Module Coordinator   Signature of HOD

K. S. INSTITUTE OF TECHNOLOGY, BENGALURU-560109
TENTATIVE CALENDAR OF EVENTS: I ODD SEMESTER (2023-2024)
DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES
SESSION: SEP 2023 TO JAN 2024

Week No.	Month	Mon	Tue	Wed	Thu	Fri	Sat	Days	Activities	Department Events
1	SEP	4 *	5	6	7	8	9	6	4* Commencement of I sem	4th - 14th Sep 2023 Induction Programme
2	SEP	11	12	13	14	15 *	16D H	5	15*-Commencement of I sem	12-Fire extinguisher education & awareness program. 15-International Day of Democracy. 12th to 14th -AIML &ME - Professional development & workplace excellence
3	SEP	18H	19	20	21	22	23	5	18-Varasiddhi Vinayaka Vrata 23-Monday Time Table	21st to 23rd -CSD-Professional development & workplace
4	SEP	25	26	27	28H	29	30	5	28-Eid-Milad 30-Thursday Time Table	
5	OCT	2H	3	4	5	6	7DH	4	2-Gandhi Jayanthi	3rd,4th &6th-CSE-A SECTION-Professional development & workplace excellence
6	OCT	9	10	11	12	13	14H	5	14- Mahalaya Amavasya	12- Importence of English in Engineering. 11th to 13th-CSE-B SECTION-Professional development & workplace excellence
7	OCT	16	17	18	19	20	21D H	5		16th to 18th-CSE-C SECTION-Professional development & workplace excellence
8	OCT	23H	24H	25	26	27	28 H	3	23-Mahanavami,Ayudhapooja 24- Vijayadasami 28 - Valmiki Jayanthi	26-Lifestyle and stress management. 26th &27th-ECE-F SECTION-Professional development & workplace excellence
9	OCT/ NOV	30	31	1H	2	3 TA	4DH	4	1-Kannada Rajyothsava	2nd-ECE-F SECTION-Professional development & workplace excellence
10	NOV	6 T1	7 T1	8 T1	9	10	11	6	11-Wednesday Time Table	
11	NOV	13	14H	15 BV	16 ASD	17 *FFB1	18D H	4	14-Balipadyami, Deepavali 17- First Faculty Feed Back	
12	NOV	20	21	22	23	24	25	6	25- Wednesday Time Table	22-Class Committee Meeting-I 24- Talk on chemistry. 25th-ECE-G SECTION-Professional development & workplace
13	NOV/ DEC	27	28	29	30H	1	2DH	4	30- Kanakadasa Jayanti	27-Parent Teacher Meeting-I 27th & 28th-ECE-G SECTION-Professional development & workplace excellence
14	DEC	4	5	6	7	8	9	6	9- Tuesday Time Table	7th to 9th-IOT-Professional development & workplace excellence
15	DEC	11	12	13	14	15	16D H	5		11th to 13th-CCE--Professional development & workplace excellence 15-Class Committee Meeting-II
16	DEC	18	19	20	21	22	23 TA	6	23- Monday Time Table	22-Parent Teacher Meeting-II
17	DEC	25 H	26 T2	27 T2	28 T2	29 LT	30 LT	5	25- Christmas	
18	JAN	1LT	2LT	3LT	4 *FFB	5 ASD	6DH	5	4 -Second Faculty Feed Back 6* - Last Working day	

Total No of Working Days : 89

Total Number of working days (Excluding holidays and Tests)=78

H	Holiday	Monday	14
BV	Blue Book	Tuesday	14
T1,T2,T	Tests 1,2,3	Wednesday	16
ASD	Attendance & Sessional Display	Thursday	16
DH	Declared Holiday	Friday	17
LT	Lab Test	Saturday	1
TA	Test attendance	Total	78

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K.S. INSTITUTE OF TECHNOLOGY, BENGALURU-109
TIME -TABLE FOR I SEMESTER (2023-2024)
CHEMISTRY CYCLE

Branch: CSE (ICB)

Class Teacher:Ms.TEJASWINI R

SECTION : H

Lecture Hall :OB Second Floor 207

W.E.F :08-01-2024

PERIOD	1	2	10.20 AM - 10.35 AM	3	4	12.25 PM- 1.15 PM	5	6	7
TIME/ DAY	8.30 AM - 9.25 AM	9.25 AM - 10.20 AM		10.35 AM - 11.30 AM	11.30 AM - 12.25 PM		1.15 PM - 2.10 PM	2.10 PM - 3.05 PM	3.05 PM - 4.00PM
MON	CHES BCHES102	MATS BMATS101	BREAK	BEE BESCK104B	KANNADA BKSKK107/ BKBKK107	LUNCH - BREAK	LIB	LIB	T
TUE	MATS BMATS101	CHES BCHES102		PLC BPLCK105B	BEE BESCK104B		CED BCEDK103	CED BCEDK103	T
WED	PLC BPLCK105B	MATS BMATS101		←——— BCEDK103 ———→			CHES BCHES102	LIB	T
THU	BEE BESCK104B	PLC BPLCK105B		CHES BCHES102	MATS BMATS101		CED BCEDK103	CED BCEDK103	T
FRI	PLC BPLCK105B	CHES BCHES102		IDT BIDTK158	MATS BMATS101		BEE BESCK104B	ENG BENGK106	LIB

SUBJECT CODE	SUBJECT NAME	FACULTY NAME
BMATS101	Mathematics-I for CSE Stream	Ms.TEJASWINI R
BCHES102	Applied Chemistry for CSE Stream	Dr.HARISHA S
BCEDK103	Computer-Aided Engineering Drawing	Mr.MANJUNATH B R
BESCK104B	Introduction to Electrical Engineering	Mrs. AMRUTHA A
BPLCK105B	Introduction to Python Programming	Mr.ANIL KUMAR A
BENGK106	Communicative English	Mrs.ANURADHA M V
BKSKK107/BKBKK107	Samskrutika Kannada/ Balake Kannada	Mr.THRIMURTHY R
BIDTK158	Innovation and Design Thinking	Dr.SHOBHA G

Time Table Co-ordinator

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16-2-2023

Course Title:	Introduction to Python Programming			
Course Code:	BPLCK105B/205B		CIE Marks	50
Course Type (Theory/Practical /Integrated)	Integrated		SEE Marks	50
			Total Marks	100
Teaching Hours/Week (L:T:P: S)	2:0:2:0		Exam Hours	03
Total Hours of Pedagogy	40 hours		Credits	03

Course objectives
- Learn the syntax and semantics of the Python programming language.
- Illustrate the process of structuring the data using lists, tuples
- Appraise the need for working with various documents like Excel, PDF, Word and Others.
- Demonstrate the use of built-in functions to navigate the file system.
- Implement the Object Oriented Programming concepts in Python.

Teaching-Learning Process
These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes and make Teaching –Learning more effective
1. Use https://pythontutor.com/visualize.html#mode=edit in order to visualize the python code
2. Demonstrate and visualize basic data types (list, tuple, dictionary).
3. Chalk and talk
4. online and videos

Module-1 (08 hrs)

Python Basics: Entering Expressions into the Interactive Shell, The Integer, Floating-Point, and String Data Types, String Concatenation and Replication, Storing Values in Variables, Your First Program, Dissecting Your Program, **Flow control:** Boolean Values, Comparison Operators, Boolean Operators,Mixing Boolean and Comparison Operators, Elements of Flow Control, Program Execution, Flow Control Statements, Importing Modules,Ending a Program Early with sys.exit(), **Functions:** def Statements with Parameters, Return Values and return Statements,The None Value, Keyword Arguments and print(), Local and Global Scope, The global Statement, Exception Handling, A Short Program: Guess the Number
Textbook 1: Chapters 1 – 3

Module-2 (08 hrs)

Lists: The List Data Type, Working with Lists, Augmented Assignment Operators, Methods, Example Program: Magic 8 Ball with a List, List-like Types: Strings and Tuples, References,

Dictionaries and Structuring Data: The Dictionary Data Type, Pretty Printing, Using Data Structures to Model Real-World Things,
Textbook 1: Chapters 4 – 5

Module-3 (08 hrs)

Manipulating Strings: Working with Strings, Useful String Methods, Project: Password Locker, Project: Adding Bullets to Wiki Markup

Reading and Writing Files: Files and File Paths, The os.path Module, The File Reading/Writing Process, Saving Variables with the shelve Module,Saving Variables with the print.format() Function, Project: Generating Random Quiz Files, Project: Multiclipboard,

Textbook 1: Chapters 6 , 8

Module-4 (08 hrs)

Organizing Files: The shutil Module, Walking a Directory Tree, Compressing Files with the zipfile Module, Project: Renaming Files with American-Style Dates to European-Style Dates,Project: Backing Up a Folder into a ZIP File,

Debugging: Raising Exceptions, Getting the Traceback as a String, Assertions, Logging, IDLE"s Debugger.

Textbook 1: Chapters 9-10

Module-5 (08 hrs)

Classes and objects: Programmer-defined types, Attributes, Rectangles, Instances as return values, Objects are mutable, Copying,

Classes and functions: Time, Pure functions, Modifiers, Prototyping versus planning,

Classes and methods: Object-oriented features, Printing objects, Another example, A more complicated example,The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation,

Textbook 2: Chapters 15 – 17

Course outcome (Course Skill Set)

At the end of the course the student will be able to:

CO1	Demonstrate proficiency in handling loops and creation of functions.
CO2	Identify the methods to create and manipulate lists, tuples and dictionaries.
CO3	Develop programs for string processing and file organization
CO4	Interpret the concepts of Object-Oriented Programming as used in Python.

Programming Exercises:

1. a. Develop a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages.
   b. Develop a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.

2. a. Develop a program to generate Fibonacci sequence of length (N). Read N from the console.
   b. Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).

3. Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable messages.

4. Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.

5. Develop a program to print 10 most frequently appearing words in a text file. [Hint: Use dictionary

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with distinct words and their frequency of occurrences. Sort the dictionary in the reverse order of frequency and display dictionary slice of first 10 items]

6. Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Hint: Use string methods strip(), len(), list methods sort(), append(), and file methods open(), readlines(), and write()].

7. Develop a program to backing Up a given Folder (Folder in a current working directory) into a ZIP File by using relevant modules and suitable methods.

8. Write a function named DivExp which takes TWO parameters a, b and returns a value c (c=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0. Develop a suitable program which reads two values from the console and calls a function DivExp.

9. Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.

10. Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint: Use list to store the marks in three subjects and total marks. Use __init__() method to initialize name, USN and the lists to store marks and total, Use getMarks() method to read marks into the list, and display() method to display the score card details.]

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). The minimum passing mark for the SEE is 35% of the maximum marks (18 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation (CIE):

The CIE marks for the theory component of the IC shall be **30 marks** and for the laboratory component **20 Marks.**

CIE for the theory component of the IC

• Three Tests each of 20 Marks; after the completion of the syllabus of 35-40%, 65-70%, and 90-100% respectively.

• Two Assignments/two quizzes/ seminars/one field survey and report presentation/one-course project totaling 20 marks.

Total Marks scored (test + assignments) out of 80 shall be scaled down to **30 marks**

CIE for the practical component of the IC

• On completion of every experiment/program in the laboratory, the students shall be

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evaluated and marks shall be awarded on the same day. The **15 marks** are for conducting the experiment and preparation of the laboratory record, the other **05 marks shall be for the test** conducted at the end of the semester.

- The CIE marks awarded in the case of the Practical component shall be based on the continuous evaluation of the laboratory report. Each experiment report can be evaluated for 10 marks. Marks of all experiments' write-ups are added and scaled down to 15 marks.

- The laboratory test **(duration 03 hours)** at the end of the 15th week of the semester /after completion of all the experiments (whichever is early) shall be conducted for 50 marks and scaled down to **05 marks.**

Scaled-down marks of write-up evaluations and tests added will be CIE marks for the laboratory component of IC/IPCC for **20 marks.**

- The minimum marks to be secured in CIE to appear for SEE shall be 12 (40% of maximum marks) in the theory component and 08 (40% of maximum marks) in the practical component. The laboratory component of the IC/IPCC shall be for CIE only. However, in SEE, the questions from the laboratory component shall be included. The maximum of 05 questions is to be set from the practical component of IC/IPCC, the total marks of all questions should not be more than 25 marks.

The theory component of the IC shall be for both CIE and SEE.

Semester End Examination (SEE):
SEE for IC
Theory SEE will be conducted by University as per the scheduled time table, with common question papers for the course (duration 03 hours)

1. The question paper will have ten questions. Each question is set for 20 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.
3. The students have to answer 5 full questions, selecting one full question from each module.

The theory portion of the Integrated Course shall be for both CIE and SEE, whereas the practical portion will have a CIE component only. Questions mentioned in the SEE paper shall include questions from the practical component).

Passing standard:

- The minimum marks to be secured in CIE to appear for SEE shall be 12 (40% of maximum marks-30) in the theory component and 08 (40% of maximum marks -20) in the practical component. The laboratory component of the IPCC shall be for CIE only. However, in SEE, the questions from the laboratory component shall be included. The maximum of 04/05 questions to be set from the practical component of IPCC, the total marks of all questions should not be more than 30 marks.

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- SEE will be conducted for 100 marks and students shall secure 35% of the maximum marks to qualify for the SEE. Marks secured will be scaled down to 50.

Suggested Learning Resources:

Text Books

1. Al Sweigart,"Automate the Boring Stuff with Python",1st Edition, No Starch Press, 2015. (Available under CC-BY-NC-SA license at https://automatetheboringstuff.com/)

(Chapters 1 to 18, except 12) for lambda functions use this   link: https://www.learnbyexample.org/python-lambda-function/

2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2nd Edition, Green Tea Press, 2015. (Available under CC-BY-NC license at http://greenteapress.com/thinkpython2/thinkpython2.pdf

(Chapters 13, 15, 16, 17, 18) (Download pdf/html files from the above link)

Web links and Video Lectures (e-Resources):

- https://www.learnbyexample.org/python/
- https://www.learnpython.org/
- https://pythontutor.com/visualize.html#mode=edit

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Quizzes for list, tuple, string dictionary slicing operations using below link https://github.com/sushantkhara/Data-Structures-And-Algorithms-with-Python/raw/main/Python%203%20_%20400%20exercises%20and%20solutions%20for%20beginners.pdf

COs and POs Mapping (Individual teacher has to fill up)

COs	POs						
	1	2	3	4	5	6	7
CO1							
CO2							
CO3							
CO4							
CO5							

Level 3- Highly Mapped,   Level 2-Moderately Mapped,   Level 1-Low Mapped,   Level 0- Not Mapped

Head of the Department
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K.S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN 2023-2024-ODD SEMESTER

COURSE INCHARGE   : ANILKUMAR A

COURSE CODE/TITLE   : INTEGRATED/BPLCK105B/INTRODUCTION TO PYTHON PROGRAMMING

YEAR/SEMESTER/SECTION : I/I/H

BRANCH   : COMPUTER SCIENCE & ENGINEERING(IOT AND CYBERSECURITY INCLUDING BLOCKCHAIN TECHNOLOGY)

Sl. No.	Topic to be covered	Mode of Delivery	Teaching Aid	No. of Periods	Cumulative No. of Periods	Proposed Date
	Module 1: Python Basics					
1	**Python Basics:** Entering Expressions into the Interactive Shell,	L+D,PS	BB/PPT	1	1	15/09/2023
2	The Integer, Floating-Point, and String Data Types,	L+D,PS	BB/PPT	1	2	19/09/2023
3	String Concatenation and Replication, Storing Values in Variables	L+D,PS	BB/PPT	1	3	20/09/2023
4	Your First Program, Dissecting Your Program,	L+D,PS	BB/PPT	1	4	21/09/2023
5	**Flow control:** Boolean Values, Comparison Operators,	L+D,PS	BB/PPT	1	5	22/09/2023
6	Boolean Operators, Mixing Boolean and Comparison Operators	L+D,PS	BB/PPT	1	6	26/09/2023
7	Elements of Flow Control,Program Execution,	L+D,PS	BB/PPT	1	7	27/09/2023
8	Flow Control Statements, Importing Modules	L+D, PS	BB/PPT	1	8	29/09/2023
9	Ending a Program Early with sys.exit()	L+D, PS	BB/PPT	1	9	30/09/2023

10	**Functions:** def Statements with Parameters	L+D, PS	BB/PPT	1	10	03/10/2023
11	Return Values and return Statements	L+D, PS	BB/PPT	1	11	04/10/2023
12	The None Value, Keyword Arguments and print(),	L+D, PS	BB/PPT	1	12	05/10/2023
13	Local and Global Scope,	L+D, PS	BB/PPT	1	13	06/10/2023
14	The global Statement	L+D, PS	BB/PPT	1	14	10/10/2023
15	**Module 1: Laboratory Experiment** a. Develop a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages b. Develop a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.	L+D, PS	LCD	LabSession-2HR	2	19/09/2023 21/09/2023 23/09/2023
16	Exception Handling	L+D, PS	BB/PPT	1	15	11/10/2023
17	A Short Program: Guess the Number	L+D, PS	BB/PPT	1	16	12/10/2023
Module 2: Lists & Dictionaries and Structuring Data						
18	**Module 2:Lists:** The List Data Type, Working with Lists	L+D, PS	BB/PPT	1	17	13/10/2023
19	The List Data Type, Working with Lists	L+D, PS	BB/PPT	1	18	17/10/2023
20	The List Data Type, Working with Lists	L+D, PS	BB/PPT	1	19	18/10/2023
21	Augmented Assignment Operators, methods	L+D, PS	BB/PPT	1	20	19/10/2023
22	Example Program: Magic 8 Ball with a List	L+D, PS	BB/PPT	1	21	20/10/2023
23	List-like Types: Strings and Tuples, References	L+D, PS	BB/PPT	1	22	25/10/2023
24	**Dictionaries and Structuring Data:** The Dictionary Data Type	L+D, PS	BB/PPT	1	23	26/10/2023
25	**Module 2: Laboratory Experiment** a. Develop a program to generate Fibonacci sequence of length (N). Read N from the console. b. Write a function to calculate factorial of a number. Develop a	L+D, PS	LCD	LabSession-2HR	2	03/10/2023 05/10/2023 09/10/2023

	program to compute binomial coefficient (Given N and R).					
26	Pretty Printing	L+D, PS	BB/PPT	1	24	27/10/2023
27	Using Data Structures to Model Real-World Things	L+D, PS	BB/PPT	1	25	31/10/2023
	Module 3: Manipulating Strings & Reading and Writing Files					
28	**Module 3: Manipulating Strings:** Working with Strings	L+D, PS	BB/PPT	1	26	02/11/2023
29	Working with Strings, Useful String Methods	L+D, PS	BB/PPT	1	27	03/11/2023
30	**INTERNAL ASSESSMENT – 1**					07/11/2023
31	Working with Strings, Useful String Methods	L+D, PS	BB/PPT	1	28	09/11/2023
32	Project: Password Locker,	L+D, PS	BB/PPT	1	29	10/11/2023
33	Project: Password Locker,	L+D, PS	BB/PPT	1	30	11/11/2023
34	Project: Adding Bullets to Wiki Markup	L+D, PS	BB/PPT	1	31	15/11/2023
35	Project: Adding Bullets to Wiki Markup	L+D, PS	BB/PPT	1	32	16/11/2023
36	**Reading and Writing Files:** Files and File Paths	L+D, PS	BB/PPT	1	33	17/11/2023
37	The os.path Module	L+D, PS	BB/PPT	1	34	21/11/2023
39	The File Reading/Writing Process	L+D, PS	BB/PPT	1	35	22/11/2023
40	Saving Variables with the shelve Module	L+D, PS	BB/PPT	1	36	23/11/2023
41	**Module 3: Laboratory Experiment** a. Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable messages. b. Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.	L+D, PS	LCD	LabSession-2HR	4	26/10/2023 30/10/2023 31/10/2023
42	Saving Variables with the print. Format () Function,	L+D, PS	BB/PPT	1	37	24/11/2023
43	Project: Generating Random Quiz Files	L+D, PS	BB/PPT	1	38	25/11/2023

44	Project: Multiclipboard	L+D, PS	BB/PPT	1	39	28/11/2023
	Module 4: Organizing Files & Debugging					
45	**Module 4: Organizing Files:** The shutil Module	L+D, PS	BB/PPT	1	40	29/11/2023
46	Walking a Directory Tree	L+D, PS	BB/PPT	1	41	01/12/2023
47	**Module 4: Laboratory Experiment** a) Develop a program to print 10 most frequently appearing words in a text file. [Hint: Use dictionary with distinct words and their frequency of occurrences. Sort the dictionary in the reverse order of frequency and display dictionary slice of first 10 items] b) Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Hint: Use string methods strip (), len (), list methods sort (), append (), and file methods open (),readlines (), and write ()]. c) Develop a program to backing Up a given Folder (Folder in a current working directory) into a ZIP File by using relevant modules and suitable methods. d) Write a function named DivExp which takes TWO parameters a, b and returns a value c (c=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0. Develop a suitable program which reads two values from the console and calls a function DivExp.	L+D, PS	LCD	LabSession-2HR	4	20/11/2023 21/11/2023 23/22/2023
48	Compressing Files with the zipfile Module,	L+D, PS	BB/PPT	1	42	05/12/2023
49	Project: Renaming Files with American-Style Dates to European-Style Dates,	L+D, PS	BB/PPT	1	43	06/12/2023
50	Project: Renaming Files with American-Style Dates to European-Style Dates,	L+D, PS	BB/PPT	1	44	07/12/2023
51	Project: Backing Up a Folder into a ZIP File,	L+D, PS	BB/PPT	1	45	08/12/2023
52	Project: Backing Up a Folder into a ZIP File,	L+D, PS	BB/PPT	1	46	09/12/2023
53	**Debugging:** Raising Exceptions	L+D, PS	BB/PPT	1	47	12/12/2023
54	Getting the Traceback as a String	L+D, PS	BB/PPT	1	48	13/12/2023
55	Assertions, Logging, IDLEs Debugger	L+D, PS	BB/PPT	1	49	14/12/2023

	Module 5: Classes and objects, Classes and functions and Classes and methods					
56	**Module 5: Classes and objects:** Programmer-defined types, Attributes, Rectangles	L+D, PS	BB/PPT	1	50	15/12/2023
57	Instances as return values, Objects are mutable, Copying	L+D, PS	BB/PPT	1	51	19/12/2023
58	**Classes and functions:** Time, Pure functions, Modifiers, Prototyping versus planning	L+D, PS	BB/PPT	1	52	20/12/2023
59	**Classes and methods:** Object-oriented features	L+D, PS	BB/PPT	1	53	21/12/2023
60	Printing objects, Another example, A more complicated example	L+D, PS	BB/PPT	1	54	22/12/2023
61	The init method, The __str__ method, Operator overloading, Type-based dispatch, Polymorphism, Interface and implementation	L+D, PS	BB/PPT	1	55	23/12/2023
62	**Module 5: Laboratory Experiment** a. Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers. b. Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint: Use list to store the marks in three subjects and total marks. Use __init__() method to initialize name, USN and the lists to store marks and total, Use getMarks() method to read marks into the list, and display() method to display the score card details.]	L+D, PS	LCD	LabSession-2HR	2	04/12/2023 05/12/2023 07/12/2023
63	**INTERNAL ASSESSMENT - 2**					27/12/2023
68	Revision	L+D, PS	BB/PPT	1	56	04/01/2024
69	Revision	L+D, PS	BB/PPT	1	57	05/01/2024

Text Books:

1. Al Sweigart,"**Automate the Boring Stuff with Python**",1stEdition, No Starch Press, 2015.(Available under CC-BY-NC-SA license at https://automatetheboringstuff.com/)(Chapters 1 to 18, except 12) for lambda functions use this link:https://www.learnbyexample.org/python-lambda-function/

2. Allen B. Downey, "**Think Python: How to Think Like a Computer Scientist**", 2nd Edition,Green Tea Press, 2015. (Available under CC-BY-BY-NC license at http://greenteapress.com/thinkpython2/thinkpython2.pdf (Chapters 13, 15, 16, 17, 18) (Download pdf/html files from the above link)

Web links and Video Lectures (e-Resources):

1. https://www.learnbyexample.org/python/
2. https://www.learnpython.org/
3. https://pythontutor.com/visualize.html#mode=edit

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Quizzes for list, tuple, string dictionary slicing operations using below link:
  https://github.com/sushantkhara/Data-Structures-And-Algorithms-withPython/raw/main/Python%203%20_%20400%20exercises%20and%20solutions%20for%20beginners.pdf

Details of the teaching aids: Chalk and talk, videos, ppt, animations, NPTEL videos, NPTEL lectures. etc.,

Course Incharge	**Module coordinator**	**HOD**	**Principal**

Head of the Department
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K. S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109
DEPARTMENT OF APPLIED SCIENCE & HUMANITIES
2023 – 24 ODD SEMESTER
I ASSIGNMENT

Academic Year	2023-24
Batch	2023-27
Year/Semester/section	I/I/H
Subject Code-Title	BPLCK105B – Introduction to Python Programming

Name of the Course Incharge	Mr Anil Kumar A	Dept	ME

Assignment No: 1   Total marks:10
Date of Issue: 1/12/2023   **Date of Submission: 8/12/2023**

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

Q No.	Question	K Level	CO	Marks
1	Define and **explain** the difference between integer, floating-point, and string data types in Python. Provide an example of each and demonstrate how to store them in variables.	K2	1	1
2	**Discuss** the roles of the 'break' and 'continue' statements in loop control, illustrating their functionality with examples	K2	1	1
3	**Explain** the difference between local and global scope in Python. Provide an example demonstrating a variable in a local scope shadowing a variable in a global scope.	K2	1	1
4	**Develop** a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages	K3	1	1
5	Explain and provide an example for each of the following list methods: **append(), insert(), remove(), sort()**	K2	2	1
6	Explain how negative indexing works in Python lists. Provide an example **demonstrating** how to use negative indexing to access items from the end of a list.	K2	2	1
7	**Explain** the built-in functions in list with examples in Python	K2	2	1
8	Read N numbers from the console and create a list. **Develop** a program to print mean, variance and standard deviation with suitable messages.	K3	2	1
9	**Explain** exception handling, and why is it important in programming? Write a Python function that demonstrates how to handle a specific exception.	K2	3	1
10	**Explain** the following methods with examples i)keys() ii) values() iii) items() in a dictionary	K2	3	1

Signature of Course-incharge

Signature of HOD/MED

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K. S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109

DEPARTMENT OF APPLIED SCIENCE & HUMANITIES
2023 – 24 ODD SEMESTER
II ASSIGNMENT

Academic Year	2023-24		
Batch	2023-27		
Year/Semester/section	I/I/H		
Subject Code-Title	BPLCK105B – Introduction to Python Programming		
Name of the Course Incharge	Mr Anil Kumar A	Dept	ME

Assignment No: 2	Total marks:10
Date of Issue: 29/12/2023	Date of Submission: 4/1/2024

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

Q No.	Question	K Level	CO	Marks
1	Explain the following methods with suitable examples i) upper(), ii) lower(), iii) partition(), iv) join(), v) split()	K2	3	1
2	Explain the concept of file path. Also discuss absolute and relative file paths.	K2	3	1
3	Explain the following file operations in python with suitable examples: i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders	K2	4	1
4	Develop a program to backing up a given folder into a ZIP File using relevant modules & suitable methods.	K3	4	1
5	Develop a function named DivExp, which takes two parameters a,b and returns a value C (C=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0. Develop a suitable program which reads two values from the console and calls a function DivExp.	K2	4	1
6	List out the benefits of using Logging module with an example.	K2	4	1
7	Explain _ _init_ _() and _ _str_ _() method with example.	K2	5	1
8	Briefly explain the printing of objects with an example.	K2	5	1
9	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.	K3	5	1
10	Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details.	K3	5	1

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Bengaluru-560 109

K.S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
FIRST INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER

SET: A

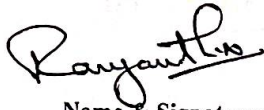|			
USN			

Degree : B.E   Semester : I

Branch - Stream : IOT/CCE - CSE, ECE/ME ~EEE,ME   Course Type / Code : Integrated/BPLCK105B

Course Title : Introduction to Python Programming   Date : 10/11/2023

Duration : 1 ½ Hr (90 minutes)   Max Marks : 50
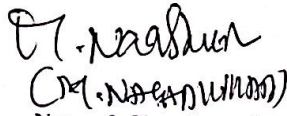
Note: Answer **ONE full** question from each part.

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

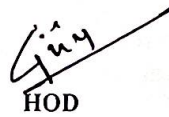| Q No.	Questions	Marks	CO	K-Level
	Module 1			
1(a)	Define and **explain** the difference between integer, floating-point, and string data types in Python. Provide an example of each and demonstrate how to store them in variables.	5	CO1	K2
(b)	**Discuss** the roles of the 'break' and 'continue' statements in loop control, illustrating their functionality with examples	5	CO1	K2
(c)	**Develop** a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages	10	CO1	K3
	OR			
2(a)	**Explain** the difference between local and global scope in Python. Provide an example demonstrating a variable in a local scope shadowing a variable in a global scope.	5	CO1	K2
(b)	**Demonstrate** with example print(), input(), string concatenation and string replication.	5	CO1	K2
(c)	**Develop** a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.	10	CO1	K3
	Module 2			
3(a)	Define what a list is in Python and provide an example. How would you access the third element in the list **spam= [10, 20, 30, 40]**?	5	CO2	K2
(b)	Explain and provide an example for each of the following list methods: **append(), insert(), remove(), sort()**	5	CO2	K2
(c)	Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	10	CO2	K3
	OR			
4(a)	**Explain** what an augmented assignment operator is. Provide an example of how to use the += operator with a list in Python.	5	CO2	K2
(b)	Explain how negative indexing works in Python lists. Provide an example **demonstrating** how to use negative indexing to access items from the end of a list.	5	CO2	K2
(c)	Read N numbers from the console and create a list. **Develop** a program to print mean, variance and standard deviation with suitable messages.	10	CO2	K3
	Module 3			
5(a)	**Interpret** the mutable and immutable data types in Python. Provide examples of each and explain how references behave differently with these types	5	CO3	K2
(b)	**Explain** exception handling, and why is it important in programming? Write a Python function that demonstrates how to handle a specific exception.	5	CO3	K2
	OR			

6(a)	**Explain** what a reference is in the context of Python programming. How does Python use references when assigning variables or passing arguments to functions?	5	CO3	K2
(b)	**Explain** the following methods with examples i)keys() ii) values() iii) items() in a dictionary	5	CO3	K2

Name & Signature of
Course In charge:

Name & Signature of
Module Coordinator:

HOD

Principal

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
FIRST INTERNAL TEST 2023-24 ODD SEMESTER

SET-SCHEME AND SOLUTION

SET-A

Degree : B.E
Branch - stream : IOT/CCE – CSE, ECE, ME
Course Title : Introduction to Python Programming

Semester : I
Course Type / Code : Integrated /BPLCK205B
Max Marks : 50

Q.NO.	POINTS	MARKS
1 (a)	Definition of integer, floating point, string — (3M) (differences) Examples ——→ (2M)	5M
(b)	Explanation of break statement with Example } →(2.5M) Explanation of continue statement with example } → (2.5M)	(5M)
(c)	Student details program ——→ (8M) for o/p ——→ (2M)	(10M)
2 (a)	diff. b/w local and global scope ——→ (3M) Example for each ——→ (2M)	(5M)
(b)	Explanation with example → print() →(1M) → input() →(1M) → string concatenation & explanation (Replication) →(3M)	(5M)
(c)	Senior citizen program → (8M) } o/p → (2M) } ——→ (10M)	(10M)
3 (a)	Definition of list with example ——→(2M) accessing 3rd element → Spam = [10, 20, 30, 40] →(3M)	(5M)

3(b) Explanation append(), insert(), remove(), sort() with examples } (5M)

(c) factorial and binomial Co-efficient ——————→ (10M)

4(a) Explanation of Augment Assignment Operator with example } ——→(5M)

(b) Explanation of negative indexing ——→ (2M)
    example ——→ (3M) (5M)

(c) program to find mean, variance & standard deviation (10M)

5(a) Explanation with example: mutable ——→ 2.5M
    immutable ——→ 2.5M } (5M)

(b) Explanation of Exception handling with examples } ——————→ (5M)

6(a) Explanation of References in Python ——→ 2.5
    with example ——→ 2.5 } (5M)

(b) Explanation with Example:
    (i) key() ——→ 1M
    (ii) values() ——→ 2M
    (iii) items() ——→ 2M } ——————→ (5M)

Ranjanth.N
Course In-charge

H. Naalhu
Module Coordinator

HOD

K.S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
FIRST INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER

SET: B

Degree :	B.E	USN	
Branch - Stream :	IOT/CCE - CSE, ECE, ME-EEE,ME	Semester :	I
Course Title :	Introduction to Python Programming	Course Type / Code :	Integrated/BPLCK105B
Duration :	1 ½ Hr (90 minutes)	Date :	10/11/2023
		Max Marks :	50

Note: Answer **ONE full** question from each part.

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

Q No.	Questions	Marks	CO	K-Level
	Module 1			
1(a)	Discuss the significance of operator precedence in programming and **explain** how it operates in Python. Provide examples to demonstrate Python's rules of precedence in action	5	CO1	K2
(b)	**Illustrate** how string concatenation and string replication operators function in Python, providing examples to illustrate their usage	5	CO1	K2
(c)	**Develop** a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.	10	CO1	K3
	OR			
2(a)	**Summarize** a comprehensive overview of the control flow statements **if, if-else,** and **if – else-elif** in Python, including their proper syntax and illustrative examples	5	CO1	K2
(b)	**Demonstrate** a program to read the Richter magnitude value from the user and display the result for the following conditions using *if...elif...else* statement. <table><tr><td>**Richter Magnitude**</td><td>**Information**</td></tr><tr><td>> 1.0 and < 2.0</td><td>Microearthquakes not felt or rarely felt</td></tr><tr><td>> 2.0 and < 4.0</td><td>Very rarely causes damage</td></tr><tr><td>> 4.0 and < 5.0</td><td>Damage done to weak buildings</td></tr><tr><td>> 5.0 and < 6.0</td><td>Cause damage to the poorly constructed building</td></tr><tr><td>> 6.0 and < 7.0</td><td>Causes damage to well-built structures</td></tr><tr><td>> 7.0 and < 8.0</td><td>Causes damage to most buildings</td></tr><tr><td>> 8.0 and < 9.0</td><td>Causes major destruction</td></tr><tr><td>> 9.0</td><td>Causes unbelievable damage</td></tr></table>	5	CO1	K2
(c)	**Develop** a python program to generate fibonacci sequence of length(N). Read N from console	10	CO1	K3
	Module 2			
3(a)	With a detailed description, **explain** various list methods available in Python, accompanied by examples to showcase their usage and functionality	5	CO2	K2
(b)	**Explain** what an augmented assignment operator is. Provide an example of how to use the - = operator with a list in Python.	5	CO2	K2
(c)	Write a function to **calculate** factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	10	CO2	K3
	OR			
4(a)	**Illustrate** the use of in and not in operators in list with suitable examples	5	CO2	K2
(b)	**Explain** the built-in functions in list with examples in Python	5	CO2	K2
(c)	Read N numbers from the console and create a list. **Develop** a program to print mean, variance and standard deviation with suitable messages.	10	CO2	K3
	Module 3			
5(a)	**Explain** set () and default () method in a dictionary	5	CO3	K2

(b)	**Outline** the merits of dictionary over list	5	CO3	K2
	OR			
6(a)	**Demonstrate** a python program to store data about your friend's birthday	5	CO3	K2
(b)	**Explain** pretty printing with example	5	CO3	K2

Name & Signature of
Course In charge:

(M-NACADWINN)
Name & Signature of
Module Coordinator:

HOD

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K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
FIRST INTERNAL TEST 2023 – 24 ODD SEMESTER

SET-SCHEME AND SOLUTION   SET-B

Degree   : B.E   Semester : I
Branch - stream : IOT/CCE – CSE, ECE, ME   Course Type / Code : Integrated /BPLCK205B
Course Title   : Introduction to Python Programming   Max Marks : 50

Q.NO.	POINTS	MARKS
1 ⓐ	Explanation of order of Precedence with — example	5M
ⓑ	String Concatenation with example } String replication with example } — 2.5*2 5M	5M
ⓒ	Senior Citizen program with example — (O/P)	10M
2 ⓐ	Explanation with example: (i) it — 1 (ii) if-else — 2 (iii) if-else-elif — 2	5M
ⓑ	program on Ritcher magnitude & information —	5M
ⓒ	fibonacci frequency of length (N) —	10M
3 ⓐ	Various list method (append, insert, sort etc) Explanation with example.	5M
ⓑ	Explanation of augment Assignment Operator with example (-=)	5M
ⓒ	factorial & Binomial Co-efficient program with o/p.	10M
4 ⓐ	Explanation of in & not in operators in list with example	5M

4 (b) Explanation of Built in function in list ——— 3M
Examples ——— 2M — (5M)

(c) mean, Variance & Standard deviation program — (10M)

5 (a) Explanation of Set C) method
Set default method } 2*2-5 — (5M)

(b) advantages of dictionary over list ——— (5M)

6 (a) Python program to store data about your friends birthday — (5M)

(b) Explanation of Pretty Print function with example — (5M)

Rayanth N   M. Prasad   Giri
Course In-charge   Module Coordinator   **HOD**

K.S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
SECOND INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER

SET: A

Degree	: B.E	Semester	:	I
Branch - Stream	: IOT/CCE - CSE, ECE, ME	Course Type / Code	:	Integrated/BPLCK105B
Course Title	: Introduction to Python Programming	Date	:	27-12-2023
Duration	: 1 ½ Hr (90 minutes)	Max Marks	:	50

USN

Note: Answer **ONE full** question from each module.

K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

Q No.	Questions	Marks	CO	K-Level
	Module 3			
1(a)	**Explain** i) isalpha(), ii) isalnum(), iii) isspace(), iv) join() and split() method with examples.	5	CO3	K2
(b)	**Explain** the concept of file handling. Also explain reading and writing process with suitable example.	5	CO3	K2
	OR			
2(a)	**Explain** the concept of file path. Also discuss absolute and relative file paths.	5	CO3	K2
(b)	Briefly **explain** saving variables with shelve module.	5	CO3	K2
	Module 4			
3(a)	**Explain** the following file operations in python with suitable examples: i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders	6	CO4	K2
(b)	**Develop** a program to backing up a given folder into a ZIP File using relevant modules & suitable methods.	7	CO4	K3
(c)	**Develop** a function named DivExp, which takes two parameters a,b and returns a value C (C=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0. Develop a suitable program which reads two values from the console and calls a function DivExp.	7	CO4	K3
	OR			
4(a)	Briefly **explain** assertions and raising an exception.	6	CO4	K2
(b)	**List out** the benefits of using Logging module with an example.	8	CO4	K3
(c)	**Develop** a program to sort the contents of a text file and write the sorted contents in to a new file.	6	CO4	K3
	Module 5			
5(a)	**Explain** _ _init_ _() and _ _str_ _() method with example.	6	CO5	K2
(b)	**Explain** the concept of copying using copy module with an example.	6	CO5	K2
(c)	Define a class and object. Construct the class called rectangle and initialize it with height=100, width=200, starting point as (x=0 and y=0). **Develop** a program to display coordinates of center of a rectangle.	8	CO5	K3
	OR			
6(a)	**Explain** the concept of inheritance with an example.	6	CO5	K2
(b)	Briefly **explain** the printing of objects with an example.	6	CO5	K2
(c)	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. **Develop** a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.	8	CO5	K3

(APINJUMPR.A)
Name & Signature of Course In charge:

(M-NACADIV (17H)
Name & Signature of Module Coordinator:

HOD

Principal

Selected

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K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
SECOND INTERNAL TEST 2023 – 24 ODD SEMESTER

SET-A   **SCHEME AND SOLUTION**

Degree	:	B.E	Semester : I
Branch - stream	:	IOT/CCE - CSE, ECE, ME	Course Type / Code :Integrated /BPLCK105B
Course Title	:	Introduction to Python Programming	Max Marks :50

Q.NO.	POINTS	MARKS
(1a)	Explanation → 2.5M Examples → 2.5M	5M
(1b)	File Handling Explanation → 2M Reading & writing → 3M	5M
(2a)	Absolutepath Explanation & Example → 2.5M Relativepath Explanation & Example → 2.5M	5M
(2b)	Shelve module Explanation → 2M Example → 3M	5M
(3a)	Explanation & Example for Copying → 2M Explanation & Example for Moving → 2M Explanation & Example for Deleting → 2M	6M
(3b)	Program with Proper Syntax →	7M
(3c)	Program with proper Syntax →	7M
(4a)	Assertion Explanation with Example → 3M Raising an Exception Explanation with Example → 3M	6M
(4b)	Explaining different logging levels →	8M
(4c)	Program with Proper Syntax →	6M

(5a)	Init method Explanation with Example → 3M Str method Explanation with Example → 3M	6 M.
(5b)	Copying module Explanation ⟶ 2M Example ⟶ 4M	6M
(5c)	Class & object Definition ⟶ 2M Program with Proper Syntax ⟶ 4M	6M.
(6a)	Inheritance Explanation ⟶ 2M Example ⟶ 4M	6M
(6b)	Printing object with Example ⟶	6M
(6c)	Program with Proper Syntax ⟶	8M.

K.S. INSTITUTE OF TECHNOLOGY, BENGALURU - 560109
SECOND INTERNAL TEST QUESTION PAPER 2023-24 ODD SEMESTER

SET: B

Degree	: B.E		
Branch - Stream	: IOT/CCE - CSE, ECE, ME	Semester : I	
Course Title	: Introduction to Python Programming	Course Type / Code : Integrated/BPLCK105B	
Duration	: 1 ½ Hr (90 minutes)	Date : 27-12-2023	
		Max Marks : 50	

USN

Note: Answer **ONE full** question from each module.
K-Levels: K1-Remebering, K2-Understanding, K3-Applying, K4-Analyzing, K5-Evaluating, K6-Creating

Q No.	Questions	Marks	CO	K-Level
	Module 3			
1(a)	**Explain** the following methods with suitable examples i) upper(), ii) lower(), iii) partition(), iv) join(), v) split()	5	CO3	K2
(b)	**Develop** a python program to swap cases of a given string. Input: PyThoN - output :pYtHOn	5	CO3	K2
	OR			
2(a)	**Explain** with an example opening a file with open(), reading the content of a file with read() and writing the contents in to a text file with write().	5	CO3	K2
(b)	**Explain** saving a variable with pprint.pformat().	5	CO3	K2
	Module 4			
3(a)	How do you copy file and folders using shutil module? **Explain** in detail.	4	CO4	K2
(b)	**Develop** a program to sort the contents of a text file and write the sorted contents into a separate text file.	8	CO4	K3
(c)	**Explain** logging module and debug the factorial of a number program.	8	CO4	K2
	OR			
4(a)	List out the benefits of compressing a file. With code, **explain** reading and extracting from a zip file.	6	CO4	K2
(b)	What are Assertions? Write the contents of an assert statement. **Explain** them with example.	6	CO4	K2
(c)	**Develop** a program to print 10 most frequently appearing words in a text file.	8	CO4	K3
	Module 5			
5(a)	What is a class? How to define a class? **Explain** how to initiate class and how the class members are accessed.	6	CO5	K2
(b)	**Explain** printing objects.	6	CO5	K2
(c)	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. **Develop** a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.	8	CO5	K3
	OR			
6(a)	**Define** pure functions. Illustrate with an example	6	CO5	K2
(b)	**Explain** _ _init_ _() and _ _str_ _() method with example.	6	CO5	K2
(c)	**Develop** a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details.	8	CO5	K3

Name & Signature of
Course In charge:

Name & Signature of
Module Coordinator:

HOD

Principal

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Bengaluru - 560 109.

K.S. INSTITUTE OF TECHNOLOGY, BANGALORE - 560109
SECOND INTERNAL TEST 2023 – 24 ODD SEMESTER

SET-B   **SCHEME AND SOLUTION**

Degree	: B.E	Semester : I
Branch - stream	: IOT/CCE - CSE, ECE, ME	Course Type / Code :Integrated /BPLCK105B
Course Title	: Introduction to Python Programming	Max Marks :50

Q.NO.	POINTS	MARKS
(1a)	Explanation ———————→ 2.5M Examples ———————→ 2.5M	5M
(1b)	Program with Proper Syntax ———————→	5M
(2a)	Opening a file with open() ———→ 2M Reading a file with read() ———→ 1M writing contents in to a file ———→ 2M	5M
(2b)	PPrint. P format() Explanation ———→ 2M Example ———————→ 3M	5M
(3a)	Shutil module Explanation ———→ 2M Examples ———————→ 4M	6M
(3b)	Program with Proper Syntax ———→	8M
(3c)	logging Explanation ———————→ 4M Program ———————→ 4M	8M
(4a)	Explanation about zipfile module ——→ 2M Program with Proper Syntax ——→ 4M	6M
(4b)	Assertion Explanation ———→ 2M Syntax ———————→ 1M Example ———————→ 3M	6M
(4c)	Program with Proper Syntax —→	8M

(5a)	Definition of class & objects with → 2M Syntax.	6M
	Example ————————→ 4M	
(5b)	Printing objects with Example ————→	6M
(5c)	Program with Proper Syntax ————→	8M.
(6a)	Pure functions examples ————→ 4M	6M.
	Explanation ————————→ 8M	
(6b)	init() method explanation with example 3M str() method explanation with example 3M	6M.
(6c)	Program with Proper Syntax ——→	8M.

20/12/2023

Course In-charge

HOD
Head of the Department
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K.S. INSTITUTE OF TECHNOLOGY, BENGALURU – 560109

INTRODUCTION TO PYTHON PROGRAMMING(BPLCK105B)_CONSOLIDATE MARKS SHEET, FOR 1ST SEMESTER- 2023-2024 ACADEMIC YEAR

COMPUTER SCIENCE & ENGINEERING (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY) - CONSOLIDATE MARKS SHEET

SL. NO.	USN	NAME OF THE STUDENT	IA1	IA2	IA Total IA (50)	REDUCED (15)	A1	A2	REDUCED TO (10)	(Assign + IA) =25	LAB RECORD + OBSERVATION (15)	Lab TEST (10)	Total Marks (25)	FINAL AVERAGE (50)
1	1KS23IC001	ADITHI S BHARADWAJ	25	19	44	14	10	10	10	24	15	10	25	49
2	1KS23IC002	ADITYA KUMAR B	19	13	32	10	10	10	10	20	15	10	25	45
3	1KS23IC003	AKHILA P V	09	20	29	09	10	10	10	19	15	06	21	40
4	1KS23IC004	AKSHAY KUMAR G C	10	10	20	06	10	10	10	16	15	07	22	38
5	1KS23IC005	AMOGH K N	10	13	23	07	10	10	10	17	15	03	18	35

6	1KS23IC006	AMRUTHA R	23	அ	44	14	10	10	10	24	15	09	24	48
7	1KS23IC007	AMULYA H	24	19	43	13	10	10	10	23	15	10	25	48
8	1KS23IC008	ANUSHREE K N	24	18	42	13	10	10	10	23	15	10	25	48
9	1KS23IC009	ASHIKA A RAO	21	11	33	10	10	10	10	20	15	09	24	44
10	1KS23IC010	ASHWITHA C SHETTY	18	11	29	09	10	10	10	19	15	09	24	43
11	1KS23IC011	BADAREESH P	24	17	41	13	10	10	10	23	15	10	25	48
12	1KS23IC012	BHUVANA S	21	16	37	11	10	10	10	21	15	06	21	42
13	1KS23IC013	CHIRAYU GOWDA K	25	20	45	14	10	10	10	24	15	08	23	47
14	1KS23IC014	CS JEEVAN SETTY	22	18	40	12	10	10	10	22	15	10	25	47
15	1KS23IC015	D M YASHASWINI	24	25	49	15	10	10	10	25	15	10	25	50
16	1KS23IC016	DEEPAK M	21	15	36	11	10	10	10	21	15	10	25	46
17	1KS23IC017	DHANIISHK RAGHAVENDRA PORALALU	15	06	21	07	10	10	10	17	14	02	16	33

18	1KS23IC018	DHANUSH B R	13	10	23	07	10	10	10	17	15	09	24	41
19	1KS23IC019	DHEEMANTH S	13	10	23	07	10	10	10	17	15	05	20	37
20	1KS23IC020	FURKHAD AHMED	14	08	22	07	10	10	10	17	15	07	22	30
21	1KS23IC021	HARSHA K R	17	15	32	10	10	10	10	20	15	07	22	42
22	1KS23IC022	HARSHITH H Y	07	13	20	06	10	10	10	16	15	08	23	39
23	1KS23IC023	HUSNA FATHIMA	25	25	50	15	10	10	10	25	15	10	25	50
24	1KS23IC024	MANOHARA K N	13	12	25	08	10	10	10	18	15	05	20	38
25	1KS23IC025	MEKHALA A	23	18	41	13	10	10	10	23	15	10	25	48
26	1KS23IC026	MOHAMMED ALMAN	25	14	39	12	10	10	10	22	15	06	21	43
27	1KS23IC027	MOHD SHAIF	13	12	25	08	10	10	10	18	15	06	21	39
28	1KS23IC028	MOKSHAGNA CHOWDARY MALLINA	08	12	20	06	10	10	10	16	15	10	25	41
29	1KS23IC029	MONIKA R	24	14	38	12	10	10	10	22	15	06	21	43
30	1KS23IC030	MOULICA CHOWDARY	24	20	44	13	10	10	10	23	15	10	25	48

31	1KS23IC031	NAYANA V M	19	ఛ)	33	10	10	10	10	20	15	08	23	43
32	1KS23IC032	NEEHARIKA SHAKTHIVELAN	22	19	41	13	10	10	10	23	15	09	24	47
33	1KS23IC033	NIKHIL V	08	14	22	07	10	10	10	17	15	05	20	37
34	1KS23IC034	NITHIN KUMAR	09	12	21	07	10	10	10	17	15	03	18	35
35	1KS23IC035	NITHIN NAGAPPA DORALLI	12	09	21	06	10	10	10	16	15	0	15	31
36	1KS23IC036	P NAISHADHA CHOWDARY	17	06	23	07	10	10	10	17	15	06	21	38
37	1KS23IC037	PADIPATI SAI DIVIJA	17	11	28	09	10	10	10	19	15	09	24	43
38	1KS23IC038	PAVAN R P	14	10	24	07	10	10	10	17	15	05	20	37
39	1KS23IC039	POORVI P	16	15	31	10	10	10	10	20	15	08	23	43
40	1KS23IC040	PREETHAM KP	23	20	43	13	10	10	10	23	15	08	23	46
41	1KS23IC041	PURAV B	20	14	34	10	10	10	10	20	15	10	25	45
42	1KS23IC042	R BHARATH	15	10	25	08	10	10	10	18	15	05	20	38
43	1KS23IC043	RITU A JOSHI	19	05	24	07	10	10	10	17	15	08	23	40

44	1KS23IC044	RONALDO EVELYN GONSALVES	19	11	30	09	10	10	10	19	15	10	25	44
45	1KS23IC045	RUMAISA SYED	21	13	34	10	10	10	10	20	15	08	23	43
46	1KS23IC046	SAGARIKA SUJIL	20	18	38	12	10	10	10	22	15	07	22	44
47	1KS23IC047	SAHANA J	09	17	26	08	10	10	10	18	15	03	18	36
48	1KS23IC048	SATHWIK M	14	20	34	10	10	10	10	20	15	06	21	41
49	1KS23IC049	SATVIK R	09	18	27	09	10	10	10	19	15	08	23	42
50	1KS23IC050	SHAILAJA G S	21	09	30	09	10	10	10	19	15	10	25	44
51	1KS23IC051	SHREEHARSHA K Y	13	15	28	09	10	10	10	19	15	08	23	42
52	1KS23IC052	SUJITH M	10	10	20	06	10	10	10	16	15	08	23	39
53	1KS23IC053	T M ABHINAV	21	13	34	10	10	10	10	20	15	09	24	44
54	1KS23IC054	THARUN A N	11	13	24	07	10	10	10	17	15	04	19	36
55	1KS23IC055	TRUPTHI J	24	19	43	13	10	10	10	23	15	08	23	46
56	1KS23IC056	V PUNITH	10	10	20	06	10	10	10	16	15	05	20	36

57	1KS23IC057	VASU CHOWDARY	15	(H)	29	09	10	10	10	19	15	06	21	40
58	1KS23IC058	VEDANTH M	25	17	42	13	10	10	10	23	15	08	23	46
59	1KS23IC059	VINUTHA N	21	15	36	11	10	10	10	21	15	10	25	46
60	1KS23IC060	YASHAS NAGARAJ	08	13	21	07	10	10	10	17	15	06	21	38
61	1KS23IC061	YOGA LAKSHMI M	22	19	41	13	10	10	10	23	15	10	25	48
62	1KS23IC062	YUGA S GOWDA	20	19	39	12	10	10	10	22	15	05	20	42

Signature of Course Incharge

Signature of the HOD/MED

Head of the Department
Dept. of Mechanical Engg.
K.S. Institute of Technology
Bengaluru - 560 109

K.S. INSTITUTE OF TECHNOLOGY BANGALORE

Branch : IC   Semester : 1

Sl NO.	USN	BPLCK105B
1	1KS23IC001	24 (TH) , 25 (PR)
2	1KS23IC002	20 (TH) , 25 (PR)
3	1KS23IC003	19 (TH) , 21 (PR)
4	1KS23IC004	16 (TH) , 22 (PR)
5	1KS23IC005	17 (TH) , 18 (PR)
6	1KS23IC006	24 (TH) , 24 (PR)
7	1KS23IC007	23 (TH) , 25 (PR)
8	1KS23IC008	23 (TH) , 25 (PR)
9	1KS23IC009	20 (TH) , 24 (PR)
10	1KS23IC010	19 (TH) , 24 (PR)
11	1KS23IC011	23 (TH) , 25 (PR)
12	1KS23IC012	21 (TH) , 21 (PR)
13	1KS23IC013	24 (TH) , 23 (PR)
14	1KS23IC014	22 (TH) , 25 (PR)
15	1KS23IC015	25 (TH) , 25 (PR)
16	1KS23IC016	21 (TH) , 25 (PR)
17	1KS23IC017	17 (TH) , 16 (PR)
18	1KS23IC018	17 (TH) , 24 (PR)
19	1KS23IC019	17 (TH) , 20 (PR)
20	1KS23IC020	17 (TH) , 22 (PR)
21	1KS23IC021	20 (TH) , 22 (PR)
22	1KS23IC022	16 (TH) , 23 (PR)
23	1KS23IC023	25 (TH) , 25 (PR)
24	1KS23IC024	18 (TH) , 20 (PR)
25	1KS23IC025	23 (TH) , 25 (PR)
26	1KS23IC026	22 (TH) , 21 (PR)
27	1KS23IC027	18 (TH) , 21 (PR)
28	1KS23IC028	16 (TH) , 25 (PR)
29	1KS23IC029	22 (TH) , 21 (PR)
30	1KS23IC030	23 (TH) , 25 (PR)
31.	1KS23IC031	20 (TH) , 23 (PR)
32	1KS23IC032	23 (TH) , 24 (PR)
33	1KS23IC033	17 (TH) , 20 (PR)
34	1KS23IC034	17 (TH) , 18 (PR)
35	1KS23IC035	16 (TH) , 15 (PR)
36	1KS23IC036	17 (TH) , 21 (PR)

Sl NO.	USN	BPLCK105B
37	1KS23IC037	19 (TH) , 24 (PR)
38	1KS23IC038	17 (TH) , 20 (PR)
39	1KS23IC039	20 (TH) , 23 (PR)
40	1KS23IC040	23 (TH) , 23 (PR)
41	1KS23IC041	20 (TH) , 25 (PR)
42	1KS23IC042	18 (TH) , 20 (PR)
43	1KS23IC043	17 (TH) , 23 (PR)
44	1KS23IC044	19 (TH) , 25 (PR)
45	1KS23IC045	20 (TH) , 23 (PR)
46	1KS23IC046	22 (TH) , 22 (PR)
47	1KS23IC047	18 (TH) , 18 (PR)
48	1KS23IC048	20 (TH) , 21 (PR)
49	1KS23IC049	19 (TH) , 23 (PR)
50	1KS23IC050	19 (TH) , 25 (PR)
51	1KS23IC051	19 (TH) , 23 (PR)
52	1KS23IC052	16 (TH) , 23 (PR)
53	1KS23IC053	20 (TH) , 24 (PR)
54	1KS23IC054	17 (TH) , 19 (PR)
55	1KS23IC055	23 (TH) , 23 (PR)
56	1KS23IC056	16 (TH) , 20 (PR)
57	1KS23IC057	19 (TH) , 21 (PR)
58	1KS23IC058	23 (TH) , 23 (PR)
59	1KS23IC059	21 (TH) , 25 (PR)
60	1KS23IC060	17 (TH) , 21 (PR)
61	1KS23IC061	23 (TH) , 25 (PR)
62	1KS23IC062	22 (TH) , 20 (PR)

K. S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109

DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES

ACADEMIC YEAR 2023-2024

TIME TABLE FOR REMEDIAL CLASSES

Semester: I SEM (CHEMISTRY CYCLE)
Venue: ROOM 204, 205,206,207, 208
Time: 3:00PM – 5:00PM

Sl. No	Subject Code	Subject	Days	Name of Faculty	Signature of Faculty
1	BMATE101	Mathematics-I for EES	20.11.2023& 21.11.2023	Mrs. SNEHA G KULKARNI	
	BMATS101	Mathematics-I for CSE Stream	20.11.2023& 21.11.2023	Mrs. TEJASWINI R	
	BMATM101	Mathematics-I for ME Streams	20.11.2023& 21.11.2023	Mrs. SOWMYARANI C	
			20.11.2023& 21.11.2023	Mr. NAVEEN V	
2	BCHEE102	Applied Chemistry for EES Stream	22.11.2023& 23.11.2023	Dr. KIRAN KUMAR S R	
	BCHES102	Applied Chemistry for CSE Stream	22.11.2023& 23.11.2023	Mrs. SHYLAJA K R	
	BCHEM102	Applied Chemistry for ME Streams	22.11.2023& 23.11.2023	Mrs. RADHIKA N P	
			22.11.2023& 23.11.2023	Dr. HARISH S	
3	BESCK104B	Introduction to Electrical Engineering	24.11.2023& 25.11.2023	Mrs. RAMYA K R	
	BESCK104A	Introduction to Civil Engineering	24.11.2023& 25.11.2023	Mrs. AMRUTHA A	
			24.11.2023& 25.11.2023	Mrs. TEJASWINI M L	

4	BPLCK105B	Introduction to Python Programming	27.11.2023& 28.11.2023	Mr. NAGABHUSHANA	
			27.11.2023& 28.11.2023	Dr. GIRISH T R	
			27.11.2023& 28.11.2023	Mr. RANGANATH N	
			27.11.2023& 28.11.2023	Mr. ANIL KUMAR A	

Time table coordinator

HOD
Head of the Department
Dept. of Science and Humanities
K.S. Institute of Technology
Bengaluru - 560 109

Principal
PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.

K. S. INSTITUTE OF TECHNOLOGY

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DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES

ACADEMIC YEAR 2023-2024

TIME TABLE FOR REMEDIAL CLASSES

Semester: I SEM (CHEMISTRY CYCLE)
Venue: ROOM 204, 205,206,207, 208
Time: 3:00PM – 5:00PM

Sl. No	Subject Code	Subject	Days	Name of Faculty	Signature of Faculty
1	BMATE101	Mathematics-I for EES	04.01.2024	Mrs. SNEHA G KULKARNI	
	BMATS101	Mathematics-I for CSE Stream	04.01.2024	Mrs. TEJASWINI R	
	BMATM101	Mathematics-I for ME Streams	04.01.2024	Mrs. SOWMYARANI C	
			04.01.2024	Mr. NAVEEN V	
2	BCHEE102	Applied Chemistry for EES Stream	05.01.2024	Dr. KIRAN KUMAR S R	
	BCHES102	Applied Chemistry for CSE Stream	05.01.2024	Mrs. SHYLAJA K R	
	BCHEM102	Applied Chemistry for ME Streams	05.01.2024	Mrs. RADHIKA N P	
			05.01.2024	Dr. HARISH S	
3	BESCK104B	Introduction to Electrical Engineering	08.01.2024	Mrs. RAMYA K R	
	BESCK104A	Introduction to Civil Engineering	08.01.2024	Mrs. AMRUTHA A	
			08.01.2024	Mrs. TEJASWINI M L	

4	BPLCK105B	Introduction to Python Programming	09.01.2024	Mr. NAGABHUSHANA	
			09.01.2024	Dr. GIRISH T R	
			09.01.2024	Mr. RANGANATH N	
			09.01.2024	Mr. ANIL KUMAR A	

Time table coordinator

HOD
Head of the Department.
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K.S. Institute of Technology
Bengaluru - 560 109

Principal
PRINCIPAL
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BENGALURU - 560 109.

R. S. INSTITUTE OF TECHNOLOGY
#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109
DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES
2023-24 ODD SEMESTER

List of students who are identified as slow learners and their marks in every internal

Course and Course Code: Introduction to Python Programming (BPLCK105B)
Semester and Section: I / H-Sec
Branch : COMPUTER SCIENCE & ENGINEERING (IOT & CYBER SECURITY INCLUDING BLOCK CHAIN TECHNOLOGY)

Sl No.	USN	NAME	First Test Marks (25)	Remedial Class Dates &Attendance			mprovement Test Marks (25)	Second Test Marks (25)	Remedial Class Dates &Attendance			mprovemen Test Marks (25)	Improvement Test Marks (25)
				27-11-2023	28-11-2023	-			01-01-2024	-	-		
1	1KS23IC022	HARSHITH H Y	07	P	P	-		13	P	-	-		
2	1KS23IC028	MOKSHAGNA CHOWDARY MALLINA	08	AB	P	-		12	P	-	-		
3	1KS23IC033	NIKHIL V	08	P	P	-		14	P	-	-		
4	1KS23IC034	NITHIN KUMAR	09	AB	P	-		12	P	-	-		
5	1KS23IC035	NITHIN NAGAPPA DORALLI	12	P	AB	-		09	P	-	-		
6	1KS23IC047	SAHANA J	09	P	P	-		17	P	-	-		

7	1KS23IC049	SATVIK R	09	AB	AB	-		18	AB	-	-			
8	1KS23IC052	SUJITH M	10	AB	P	-		10	P	-	-			
9	1KS23IC054	THARUN A N	11	P	P			13	P					
10	1KS23IC056	V PUNITH	10	AB	P			10	P					
11	1KS23IC060	YASHAS NAGARAJ	08	P	P			13	P					

(ANILKUMAR·A)

Course Incharge Name & Signature

HOD

Head of the Department
Dept. of Mechanical Engg.
K.S. Institute of Technology
Bengaluru 560 109

K S INSTITUTE OF TECHNOLOGY, BANGALORE

DEPARTMENT OF MECHANICAL ENGINEERING

Introduction to Python Programming (BPLCK105B)

Question Bank

SL NO	Questions	Marks	Year
	Module - 1		
1	Explain the string concatenation and string replication operator with an example	5	Aug 2021
2	Illustrate the use of break and continue with an example	5	Aug 2021
3	With the flow chart, explain the flow control statements while, for and elif. Write a python program to check whether the given number is positive, negative or zero	10	Aug 2021
4	What are functions? Define python function with parameters and return statement. Write a python function to generate the factorial of a number	7	Aug 2021
5	Explain local and global scope with suitable example	5	Aug 2021
6	Define exception handling? How exceptions are handled in python? Write a program to solve divide by zero exception	12	Aug 2021
7	What is dictionary? How it differ from list? Write a program to count the number of occurrences of each character in string	8	Aug 2021
8	Explain computer hardware architecture with a neat diagram	5	Aug 2022
9	Explain in details the building blocks of a program. state the need for functions in python	5	Aug 2022
10	Explain syntax errors, logic errors and semantic errors. List out the differences between compiler and interpreter	6	Aug 2022
11	Explain keywords, variable names with rules, operators, operands and order of operations in python with examples	8	Aug 2022
12	List the salient features of python programming language.	6	Aug 2022
13	List and explain the syntax of all flow control statements with example	8	Aug 2022
14	Write a python program to calculate the area of acircle, rectangular and triangle. print the result	6	Aug 2022
	Module - 2		
15	What is list? Explain the concept of list slicing with example	6	Aug 2022
16	Write a python program to calculate the area and circumference of a circle input the value of radius and print the results	6	Mar 2022
17	Explain with example code snippets, different syntax range() function in python	6	Mar 2022
18	List and define the use of comparison operator in python. write the output for the following expression in python: i) 2**3 ii) 20%6 iii) 20//6	6	Mar 2022
19	What is a list? Explain the methods that are used to delete items from the list	8	Mar 2022
20	What is a program? Explain the building blocks of program	8	Mar 2022
21	What is the need for rules of precedence? Mention the rules of precedence in python. Solve the expression	8	Mar 2022

	3/2*4+3+(10/4)**3-2		
22	Write a program to take a sentence as input and display the longest word in the given sentence	8	Mar 2022
23	What is user defined function? Write a function to check if a given number is a prime or not	8	Mar 2022
24	How is the dictionary different from list? Assume a dictionary containing city and population as key and value respectively. Write a program to traverse the dictionary and display most populous city	6	Mar 2022
25	Write a program to create a list of number and display the count of even and odd numbers in the list	6	Mar 2022
26	If S = 'Hello World', explain and write the output of the following statements: i)S[1:5] ii) S[:5].iii) S[3:-1] iv) S[:]	6	Mar 2022
27	Write a python program that accepts a sentence and find the number of words, digits, uppercase letters and lower-case letters	7	Aug 2022
28	Write a python program to swap cases of a given string: Input: Java Output: jAVA	4	Aug 2022
29	List out all the useful string methods which supports in python. Explain with an example for each method	10	Aug 2022
30	What is list? Explain append (), insert () and remove () methods with examples	8	Aug 2021
31	How is tuple different from a list and which function is used to convert list to tuple	5	Feb 2021
32	Define tuple data type? List out the differences between tuple and list. Create a list of even numbers and convert it into a tuple	6	Aug 2021
33	Explain negative indexing, slicing, index (), append (), insert () and sort() method with suitable example	12	Aug 2021
34	Write a program to count how many times each letter appears in a word	7	Feb 2021
35	Write a program to read numbers repeatedly until the user enters 'done'. Once 'done' is entered print out total, count and average of the numbers	6	Feb 2021
Module - 3			
36	Explain File Reading/writing process with suitable python programs	6	Aug 2022
37	How do we specify and handle absolute relative path?	8	Aug 2022
38	What is the difference between OS and OS.path modules? Discuss the following four methods of OS module: i) Chdir() ii) walk() iii)list iv) getcwd() v) listdir()		
39	Discuss get(), item(), keys() and values() dictionary methods in python with examples	8	Feb 2021
40	With example code explain join() and split() string methods	6	Feb 2021
41	Write a python code segment to read a string and count the number of times each alphabet spears in the string using dictionary. Also indicate the output of the code segment	8	Mar 2022 (2015 scheme)
42	What is dictionary? How it differ from the list? Write a program to count the number of occurrences of each character in a string	-	-
43	Define tuple datatype? List out the differences b/w tuple and list.	-	-
44	Write the output of the following i)'Hello'.upper.isupper() ii) 'Hello'.upper().lower()	-	-

	iii) '-'.join('There can be only one.'.split())		
45	Explain setdefault () and update() methods with suitable examples and explain how setdefault() differ from update() method.	-	-
46	Explain the references in python with suitable example	-	-
47	Write a python program to create a folder PYTHON and under the hierarchy 3 files. file1, file2 and file3. Write the content in file1 as "VTU" and in file2 as "UNIVERSITY" and file3 content should be opening and merge of file1 and file2. Check out the necessary condition before write file3	6	Aug 2022
	Module 4 and 5		
48	What is class? How do we define a class in Python? How to instantiate the class and how class members are accessed?	8	Aug 2022
49	Write a python program that uses datetime module within a class, takes a birthday as input and print users age and the number of days, hours, minutes and seconds until their next birthday	7	Aug 2022
50	Illustrate the concept of inheritance with example	6	Aug 2022
51	Illustrate the concept of modifier with Python code	5	Aug 2022
52	Explain the following file operations in python with suitable examples: i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders	6	Mar 2022
53	With code snippets, explain reading, extracting and creating ZIP files in python	6	Mar 2022
54	List out the difference between shutil.copy() and shutil.copytree() method. Explain in brief move, rename is deleting files and folders in shutil module with example	7	Mar 2022
55	Explain functions of shutil module with examples	8	Feb 2021
56	What is class, object, attributes. Explain copy-copy() with an example	6	Feb 2021
57	Demonstrate pure functions and modifiers with examples	8	Feb 2021
58	Explain Polymorphism in python in detail with examples	8	Aug 2022
59	Explain __init__ method and __str__ method? Write a str method for the point class. Create a point object and print it	8	Aug 2022
60	What are classes and objects in python? Explain attributes and object diagram with an example	8	Aug 2022
61	Write a python program that uses datetime module within a class, takes a birthday as input and print users age and the number of days, hours, minutes and seconds until their next birthday	7	Aug 2022
62	What is a pure function? Explain with an example	6	Feb 2021
63	Write a note on operator overloading and polymorphism with an example	8	Feb 2021
64	Write a function called print time that takes a time object and print it in the form hour:minute:second	4	Feb 2021
65	Define a class for rectangle and write a function called area – rectangle that takes a rectangle object as argument	8	Mar 2022

	and calculates the area. Explain the code segments		
66	Define a class named appointment and define a function in that class that display appointment details such as title, date, time	4	Mar 2022
67	Explain the need for INIT method. Demonstrate the use of init method for a class time	6	Mar 2022
68	Explain __str__method and operator overloading with example	6	Mar 2022
69	Write a Python program to add and multiply two complex number objects using operator overloading concepts	6	Mar 2022
70	Discuss type – based dispatch in a python	6	Mar 2022
71	Explain classes and attributes in python language with examples	5	Sept 2020
72	Write a program that uses class to store the name and marks of students. Use list to store the marks in three subjects	6	Sept 2020
73	Explain initialization method with example	4	Sept 2020
74	Write a class rectangle that has attributes length and breadth and a method area which returns the area of the rectangle	6	Sept 2020
75	What is operator overloading? Write python code to overload "+" "-" and "*" operator by providing the methods _ _ add _ _, _ _sub _ _ and _ _ mul _ _	6	Sept 2020
	Lab Programs		
1	Develop a program to read the student details like Name, USN, and Marks in three subjects. Display the student details, total marks and percentage with suitable messages.	Lab program	
2	Develop a program to read the name and year of birth of a person. Display whether the person is a senior citizen or not.	Lab program	
3	Develop a program to generate Fibonacci sequence of length (N). Read N from the console.	Lab program	
4	Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	Lab program	
5	Read N numbers from the console and create a list. Develop a program to print mean, variance and standard deviation with suitable message	Lab Program	
6	Read a multi-digit number (as chars) from the console. Develop a program to print the frequency ofeach digit with suitable message.	Lab Program	
7	Develop a program to print 10 most frequently appearing words in a text file. [Hint: Use dictionary with distinct words and their frequency of occurrences. Sort the dictionary in the reverse order of frequency and display dictionary slice of first 10 items]	Lab Program	
8	Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Hint: Use string methods strip(), len(), list methods sort(), append(), and file methods open(), readlines(), and write()].	Lab Program	
9	Develop a program to backing Up a given Folder (Folder in a current working directory) into a ZIP File by using relevant modules and suitable methods.	Lab Program	
10	Write a function named DivExp which takes TWO parameters a, b and returns a value c (c=a/b). Write suitable assertion for a>0 in function DivExp and raise an exception for when b=0.	Lab Program	

	Develop a suitable program which reads two values from the console and calls a function DivExp.	
11	Define a function which takes TWO objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N (N >=2) complex numbers and to compute the addition of N complex numbers.	Lab Program
12	Develop a program that uses class Student which prompts the user to enter marks in three subjects and calculates total marks, percentage and displays the score card details. [Hint: Use list to store the marks in three subjects and total marks. Use __init__() method to initialize name, USN and the lists to store marks and total, Use getMarks() method to read marks into the list, and display() method to display the score card details.]	Lab Program

Head of the Department
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CBCS SCHEME

USN [| | | | | | | | |]   **BPLCK105B/BPLCKB105**

First Semester B.E./B.Tech. Degree Examination, Jan./Feb. 2023
Introduction to Python Programming

Time: 3 hrs.   Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	What is the need for role of precedence? Illustrate the rules of precedence in Python with example.	6	L2	CO1
	b.	Explain the local and global scope with suitable examples.	6	L2	CO1
	c.	Develop a program to generate Fibonacci sequence of length (N). Read N from the console.	8	L3	CO1
		OR			
Q.2	a.	What are functions? Explain Python function with parameters and return statements.	7	L2	CO1
	b.	Define exception handling. How exceptions are handled in python? Write a program to solve divide by zero exception.	7	L2	CO1
	c.	Develop a python program to calculate the area of rectangle and triangle print the result.	6	L3	CO1
		Module – 2			
Q.3	a.	Explain negative indexing, slicing, index( ), append( ), remove( ), pop( ), insert( ) and sort( ) with suitable example.	8	L2	CO2
	b.	Explain the use of in and not in operators in list with suitable examples.	6	L2	CO2
	c.	Develop a program to find mean, variance and standard deviation.	6	L3	CO2
		OR			
Q.4	a.	Explain the following methods in lists with an examples: i) len( ) ii) sum( ) iii) max( ) iv) min( ).	8	L2	CO2
	b.	Explain set( ) and setdefault( ) method in a dictionary.	6	L2	CO2
	c.	Develop a Python program to swap cases of a given string input: Java output: jAVA.	6	L3	CO2
		Module – 3			
Q.5	a.	Explain join( ) and split( ) method with examples.	8	L2	CO3
	b.	Explain with examples: i) isalpha( ) ii) isalnum( ) iii) isspace( ).	6	L2	CO3
	c.	Develop a python code to determine whether the given string is a palindrome or not a palindrome.	6	L3	CO3

BPLCK105B/BPLCKB105

		OR			
Q.6	a.	Explain the concept of file handling. Also explain reading and writing process with suitable example.	8	L2	CO3
	b.	Explain the concept of file path. Also discuss absolute and relative file path.	6	L2	CO3
	c.	Briefly explain saving variables with shelve module.	6	L3	CO3
		Module – 4			
Q.7	a.	Explain the following file operations in Python with suitable example: i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders.	6	L2	CO3
	b.	List out the benefits of compressing file? Also explain reading of a zip file with an example.	8	L2	CO3
	c.	List out the differences between shutil.copy( ) and shutil.copytree( ) method.	6	L3	CO3
		OR			
Q.8	a.	Briefly explain assertions and raising a exception.	6	L2	CO3
	b.	List out the benefits of using logging module with an example.	6	L2	CO3
	c.	Develop a program with a function named DivExp which takes two parameters a, b and returns a value C (C = a/b). Write suitable assertion for a > 0 in function DivExp and raise an exception for when b = 0. Develop a suitable program which reads two values from the console and calls a function DivExp.	8	L3	CO3
		Module – 5			
Q.9	a.	Define a class and object, construct the class called rectangle and initialize it with height = 100, width = 200, starting point as (x = 0, y = 0). Write a program to display the center point co-ordinates of a rectangle.	8	L2	CO4
	b.	Explain the concept of copying using copy module with an example.	6	L2	CO4
	c.	Explain the concept of inheritance with an example.	6	L2	CO4
		OR			
Q.10	a.	Define a function which takes two objects representing complex numbers and returns new complex number with a addition of two complex numbers. Define a suitable class 'Complex' to represent the complex number. Develop a program to read N(N > = 2) complex numbers and to compute the addition of N complex numbers.	8	L2	CO4
	b.	Explain _ _init_ _( ) and _ _str_ _( ) method with examples.	6	L2	CO4
	c.	Briefly explain the printing of objects with an examples.	6	L2	CO4

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CBCS SCHEME

USN [ ][ ][ ][ ][ ][ ][ ][ ][ ]

BPLCK205B/BPLCKB205

Second Semester B.E./B.Tech. Degree Examination, June/July 2023
Introduction to Python Programming

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Demonstrate with example print ( ), input ( ) and string replication.	6	L3	CO1
	b.	Develop a program to generate Fibonacci square of length (N). Read N from the console.	6	L3	CO1
	c.	Explain elif, for , while , break and continue statements in python with examples for each.	8	L2	CO1
		OR			
Q.2	a.	What are user defined functions? How can we pass parameters in user defined functions? Explain with suitable example.	5	L1	CO1
	b.	Explain Local and Global scope with variables for each.	8	L2	CO1
	c.	Develop a program to read the name and year of birth of a person. Print whether the person is a senior citizen or not.	7	L3	CO1
		Module – 2			
Q.3	a.	What is a List? Explain append ( ) , insert ( ) and remove ( ) methods with examples.	8	L2	CO2
	b.	Explain the following methods with example : i) keys ( ) ii) values ( ) iii) items ( ) in a dictionary.	12	L2	CO2
		OR			
Q.4	a.	How is tuple different from a list and which function is used to convert list to tuple? Explain.	6	L2	CO2
	b.	List the merits of dictionary over list.	4	L1	CO2
	c.	Read N numbers from the console and create a list. Develop a program to compute and print mean , variance and standard deviation with messages.	10	L3	CO2
		Module – 3			
Q.5	a.	Explain the following methods with suitable examples : i) upper ( ) ii) lower ( ) iii) is_upper ( ) iv) is_lower ( )	8	L2	CO3
	b.	Illustrate with example opening of a file with open ( ) function, reading the contents of the file with read ( ) and writing to files with write ( ).	12	L2	CO3

BPLCK205B/BPLCKB205

		OR			
Q.6	a.	Explain the steps involved in adding bullets to Wiki – Markup. Support with appropriate code.	10	L2	CO3
	b.	Develop a program to sort the contents of a text file and write the sorted contents into a separate text file. [Use strip ( ), len ( ), list methods sort ( ), append and file methods open ( ), readlines ( ) and write ( )].	10	L3	CO3
		Module – 4			
Q.7	a.	How do you copy files and folders using Shutil module? Explain in detail.	6	L2	CO3
	b.	What are Assertions? Write the contents of an assert statement. Explain them with examples.	8	L2	CO3
	c.	Illustrate the logging levels in python.	6	L2	CO3
		OR			
Q.8	a.	With suitable code, explain Backing up a Folder into a Zip file. Clearly mention the steps involved.	12	L2	CO3
	b.	Explain the logging module and debug the factorial of number program.	8	L3	CO3
		Module – 5			
Q.9	a.	What is a Class? How to define class in Python? How to initiate a class and how the class members are accessed?	8	L2	CO4
	b.	Define Pure function. Illustrate with an example Python program.	8	L3	CO4
	c.	Explain Printing objects.	4	L1	CO4
		OR			
Q.10	a.	What is Polymorphism? Demonstrate polymorphism with functions to find histogram to count the numbers of times each letters appears in a word and in sentence.	10	L3	CO4
	b.	Write Deck methods to add, remove shuffle and sort cards, with illustrating the problem.	10	L2	CO4

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K.S.INSTITUTE OF TECHNOLOGY, BANGALORE.
FIRST FACULTY FEED BACK REPORT 2023-2024(ODD SEM)

Staff:Mr.ANIL KUMAR A   Subject:INTRODUCTION TO PYTHON PROGRAMMING (BPLCK105B)   Section: H

1. Effective planning & organization of lecture by faculty
2. Ability of faculty to teach effectively using OFFLINE portal.
3. Subject knowledge of the faculty
4. Effective distribution of study materials
5. Communication skills of the faculty & clarity of communication

6. Syllabus coverage by the faculty
7. Test question paper setting, Evaluation of Test and Assignments
8. Effectiveness in conduction of teaching pedagogy activities
9. Interaction of faculty with students
10. Punctuality in taking classes

Sl no	SEM	Section	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	I	H	10	10	10	10	10	10	7	8	9	9
2	I	H	10	10	10	10	10	10	10	10	10	10
3	I	H	10	10	10	10	10	10	10	10	10	10
4	I	H	10	10	10	10	10	10	10	10	10	10
5	I	H	10	10	10	10	10	10	10	10	10	10
6	I	H	9	9	9	9	9	9	9	9	9	9
7	I	H	10	10	10	10	10	10	10	10	10	10
8	I	H	10	10	10	10	10	10	10	10	10	10
9	I	H	10	10	10	10	10	10	10	10	10	10
10	I	H	10	10	10	10	10	10	10	10	10	10
11	I	H	10	10	10	10	10	10	10	10	10	10
12	I	H	10	10	10	10	10	10	10	10	10	10
13	I	H	10	10	10	10	10	10	10	10	10	10
14	I	H	10	10	10	10	10	10	10	10	10	10
15	I	H	9	10	10	10	10	10	10	10	10	10
16	I	H	10	10	10	10	10	10	10	10	10	10
17	I	H	10	10	10	10	10	10	10	10	10	10
18	I	H	10	10	10	10	10	10	10	10	10	10
19	I	H	10	10	10	10	10	10	10	10	10	10
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21	I	H	10	10	10	10	10	10	10	10	1	10
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23	I	H	10	10	10	10	10	10	10	10	10	10
24	I	H	8	9	10	7	9	10	8	10	9	10
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26	I	H	10	10	10	10	10	10	10	10	10	10
27	I	H	10	10	10	10	10	10	10	10	10	10
28	I	H	10	10	10	10	10	10	10	10	10	10
29	I	H	9	9	9	9	9	9	9	9	9	9
30	I	H	10	10	10	10	10	10	10	10	10	10
31	I	H	10	10	10	10	10	10	10	10	10	10
32	I	H	10	10	10	10	10	10	10	10	10	10
33	I	H	10	10	10	10	10	10	10	10	10	10
34	I	H	10	10	10	10	10	10	10	10	10	10
35	I	H	10	10	10	10	10	10	10	10	10	10
36	I	H	10	10	10	10	10	10	10	10	10	10
37	I	H	10	10	10	10	10	10	10	10	10	10
38	I	H	10	10	10	10	10	10	10	10	10	10
39	I	H	10	10	10	10	10	10	10	10	10	10
40	I	H	10	10	10	8	10	10	9	8	10	8
41	I	H	10	10	10	10	10	10	10	10	9	10
42	I	H	10	10	10	10	10	10	10	10	10	10
43	I	H	10	10	10	10	10	10	10	10	10	10
44	I	H	10	10	10	10	10	10	10	10	10	10
45	I	H	10	10	10	10	10	10	10	10	10	10
46	I	H	10	10	10	10	10	10	10	10	10	10
47	I	H	9	9	9	9	9	9	9	9	9	9
48	I	H	10	10	10	10	10	10	10	10	10	10
49	I	H	10	10	10	10	10	10	10	10	10	10
50	I	H	10	10	10	10	10	10	10	10	10	10
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52	I	H	10	10	10	10	10	10	10	10	10	10
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56	I	H	10	10	10	10	10	10	10	10	10	10
57	I	H	10	10	10	10	10	10	10	10	10	10
58	I	H	5	5	5	5	5	5	5	5	5	5
59	I	H	10	10	10	10	10	10	10	10	10	10
Total Number of students =59			579	581	582	577	581	582	576	578	570	579
			9.81	9.85	9.86	9.78	9.85	9.86	9.76	9.80	9.66	9.81
												98.05

HOD

Head of the Department
Dept. of Mechanical Engg,
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PRINCIPAL

K.S.INSTITUTE OF TECHNOLOGY, BANGALORE.
SECOND FACULTY FEED BACK REPORT 2023-2024(ODD SEM)
Subject:INTRODUCTION TO PYTHON PROGRAMMING (BPLCK105B)

Staff:Mr.ANIL KUMAR A

Section: H

1. Effective planning & organization of lecture by faculty
2. Ability of faculty to teach effectively using OFFLINE portal.
3. Subject knowledge of the faculty
4. Effective distribution of study materials
5. Communication skills of the faculty & clarity of communication

6. Syllabus coverage by the faculty
7. Test question paper setting, Evaluation of Test and Assignments
8. Effectiveness in conduction of teaching pedagogy activities
9. Interaction of faculty with students
10. Punctuality in taking classes

Sl no	SEM	Section	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	I	H	10	10	10	10	10	10	10	10	10	10
2	I	H	10	10	10	10	10	10	10	10	10	10
3	I	H	10	10	10	10	10	10	10	10	10	10
4	I	H	10	10	10	10	10	10	10	10	10	10
5	I	H	10	10	10	10	10	10	10	10	10	10
6	I	H	10	10	10	10	10	10	10	10	10	10
7	I	H	10	10	10	10	10	10	10	10	10	10
8	I	H	10	10	10	10	10	10	10	10	10	10
9	I	H	10	10	10	10	10	10	10	10	10	10
10	I	H	10	10	10	10	10	10	10	10	10	10
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14	I	H	7	7	8	7	8	8	7	7	8	8
15	I	H	7	7	8	7	7	8	7	7	9	9
16	I	H	10	10	10	10	10	10	10	10	10	10
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21	I	H	10	10	10	10	10	10	10	10	10	10
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25	I	H	9	9	9	9	9	9	9	9	9	9
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27	I	H	10	10	9	10	10	10	10	10	10	10
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40	I	H	10	10	10	10	10	10	10	10	10	10
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47	I	H	10	9	8	9	9	9	9	9	9	9
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53	I	H	10	10	10	10	10	10	10	10	10	10
54	I	H	8	8	8	8	8	8	8	8	8	8
55	I	H	10	10	10	10	10	10	10	10	10	10
56	I	H	10	10	10	10	10	10	10	10	10	10
57	I	H	10	10	10	10	10	10	10	10	10	10
Total Number of students =57			554	553	552	549	553	550	552	551	552	554
			9.72	9.70	9.68	9.63	9.70	9.65	9.68	9.67	9.68	9.72
												96.84

HOD

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Head of the Department
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Bengaluru - 560 109

K. S. INSTITUTE OF TECHNOLOGY
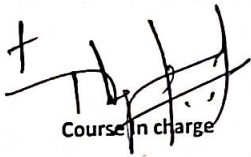#### #14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-5600109
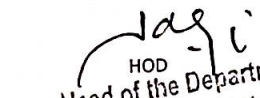### DEPARTMENT OF APPLIED SCIENCE AND HUMANITIES

YEAR / SEM / SECTION : I / I /H		SUB CODE : BPLCK105B		A.Y : 2023-24 (ODD)	
Faculty Name: Mr Anil Kumar A					

1. How well you to understand the logic of control statements(if) and loops (for and while)

2. Ability to understand the working of lists and its methods

3. What is your capability to use tuples, dictionaries for storing the data

4. What is your efficiency in working with file creation, reading and writing data

5. What is your understanding of classes and its methods in python programming

RATINGS--> 3-EXCELLENT		2-GOOD	1-SATISFACTORY				
Timestamp	ROLL NO.	NAME OF THE STUDENT	1	2	3	4	5
2023/12/30 12:04:50 PM GMT	48	Badareesh P	3	3	3	3	3
2023/12/30 12:33:35 PM GMT	43	CHIRAYU GOWDA K	3	3	3	3	3
2023/12/30 12:43:39 PM GMT	11	Husna Fathima	3	3	3	2	2
2023/12/30 1:09:02 PM GMT	15	Moulica Chowdary	3	3	3	3	3
2023/12/30 1:10:16 PM GMT	56	AMOGH K N	2	2	2	2	2
2023/12/30 1:58:10 PM GMT	28	jsahana80@gmail.com	3	3	3	3	3
3/12/30 2:51:58 PM GMT	3	Amrutha R	3	3	3	3	3
2023/12/30 2:54:47 PM GMT	49	Aditya kumarB	3	3	3	3	3
2023/12/30 2:56:13 PM GMT	62	Nithin Nagappa Doralli	1	2	2	1	2
2023/12/30 2:57:02 PM GMT	55	POORVI P	3	3	3	3	3
2023/12/30 2:57:53 PM GMT	51	Vedanth M	3	3	3	3	3
2023/12/30 3:00:03 PM GMT	23	Purav. B	2	3	3	2	2
2023/12/30 3:12:59 PM GMT	1	Adithi S Bharadwaj	3	3	3	3	2
2023/12/30 3:18:04 PM GMT	19	P Naishadha Chowdary	2	2	2	2	2
2023/12/30 3:18:35 PM GMT	18	Nithin Kumar	2	3	2	2	2
2023/12/30 3:28:41 PM GMT	39	Yoga Lakshmi M	3	3	3	3	3
2023/12/30 3:44:11 PM GMT	52	Harshith H Y	3	3	3	3	3
2023/12/30 3:45:03 PM GMT	35	V.Punith	3	3	3	3	3
2023/12/30 3:50:44 PM GMT	58	Bhuvana S	3	3	3	3	3
2023/12/30 4:16:29 PM GMT	7	Dhanush BR	3	3	3	3	3
2023/12/30 4:17:02 PM GMT	27	Sagarika Sujil	3	3	3	3	3
2023/12/30 4:18:02 PM GMT	41	Nayana.v.m	3	2	3	2	2
2023/12/30 4:26:11 PM GMT	12	MANOHAR KN	3	3	3	3	3
2023/12/30 5:13:37 PM GMT	46	Yuga s	2	2	2	2	2
2023/12/30 5:54:50 PM GMT	37	Vinutha N	3	3	3	3	3
2023/12/30 6:58:28 PM GMT	4	Ashika A Rao	3	3	3	3	1
2 /12/30 7:55:01 PM GMT	13	Mekhala A Sharma	3	3	3	3	3
2023/12/30 9:38:35 PM GMT	32	TM ABHINAV	3	3	3	2	3
2023/12/30 9:48:14 PM GMT	2	Akshay kumar G.C	3	3	3	3	3
2023/12/31 12:10:29 AM GMT	14	Monika r	3	3	3	2	3
2023/12/31 8:47:24 AM GMT	8	Dheemanth S	2	2	2	2	2
2023/12/31 9:10:24 AM GMT	38	Yashas nagaraj	3	3	3	3	3
2023/12/31 10:20:36 AM GMT	45	Akhila p.v	2	3	2	2	2
2023/12/31 10:27:09 AM GMT	36	Vasu Chowdary	3	3	3	3	3
2023/12/31 1:44:53 PM GMT	53	AMULYA H	3	3	3	3	3
2023/12/31 11:03:57 PM GMT	9	FURKHAD AHMED	3	3	3	3	3
2024/01/01 9:17:15 AM GMT	20	Padipati Sai divija	3	3	3	3	3
2024/01/01 9:21:21 AM GMT	5	Ashwitha C Shetty	3	3	3	3	3
2024/01/01 9:47:38 AM GMT	6	Dhanlishk	2	2	2	2	2
2024/01/01 9:53:57 AM GMT	10	Harsha kr	1	2	2	1	2
2024/01/01 11:26:17 AM GMT	22	Preetham kp	3	3	3	3	3
2024/01/01 11:30:04 AM GMT	40	Mohd Shaif	2	2	2	2	2
2024/01/01 11:36:10 AM GMT	29	SATVIK	2	2	2	2	2

Date/Time	No.	Name					
024/01/01 11:37:34 AM GMT	30	Shailaja G S	3	3	3	3	3
024/01/01 11:46:34 AM GMT	25	Ritu joshi	3	3	3	1	1
024/01/01 11:50:12 AM GMT	33	Tharun A N	1	1	2	3	3
024/01/01 12:10:01 PM GMT	16	Neeharika S	3	3	3	2	2
024/01/01 12:14:16 PM GMT	59	Sathwik. M.	2	2	2	3	3
024/01/01 12:16:22 PM GMT	31	Sujith M	3	3	3	3	3
024/01/01 12:16:45 PM GMT	21	Pavan	3	3	3	1	1
024/01/01 12:43:02 PM GMT	50	Jeevan setty	1	1	1	3	3
024/01/01 12:43:25 PM GMT	61	ANUSHREE K N	3	3	3	1	1
024/01/01 1:52:13 PM GMT	60	DM Yashaswini	1	1	1	3	3
024/01/01 1:56:53 PM GMT	42	Mokshagna Chowdary Mallina	3	3	3	3	2
024/01/01 3:25:59 PM GMT	57	DEEPAK M	2	2	2	3	3
024/01/01 9:34:27 PM GMT	54	Rumaisa syed	3	3	3	3	3
024/01/02 6:54:48 AM GMT	17	Nikhil.v	3	3	3	3	3
024/01/04 2:57:57 PM GMT	44	Mohammed Alman	3	3	3	3	3
024/01/04 2:58:36 PM GMT	26	Ronaldo	3	3	2	1	2
024/01/04 3:47:10 PM GMT	34	Trupthi J	3	3	3	3	3
024/01/04 8:10:16 PM GMT	47	Shree Harsha k y	3	3	3	3	3
024/01/08 5:21:29 PM GMT	24	R Bharath	3	3	3	3	3
		No.of '1's	4	3	2	5	4
		Total	62	62	62	62	62
		Percentage	93.55	95.16	96.77	91.94	93.55
		Average	94.19					

Course In charge

HOD
Head of the Department
Dept. of Science and Humanities
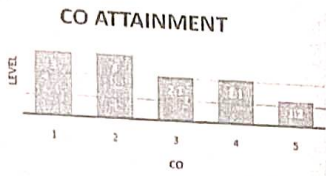K.S. Institute of Technology
Bengaluru - 560 109

K S INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER & COMMUNICATION ENGINEERING

YEAR / SEMESTER	2022-2023 / FIRST SEM
COURSE TITLE	INTRODUCTION TO PYTHON PROGRAMMING
COURSE CODE	BPLCK105B
ACADEMIC YEAR	2022-2023

Sl. No	USN	NAME	Internals					Assignment					Record,Observation&Viva					Lab IA	SEE
			CO 1	CO 2	CO 3	CO 4	CO 5	CO 1	CO 2	CO 3	CO 4	CO 5	CO 1	CO 2	CO 3	CO 4	CO 5		
			12 M	12 M	12 M	12 M	12 M	4 M	4 M	4 M	4 M	4 M	3 M	3 M	3 M	3 M	3 M	5 M	50 M
1	1KS22CM001	ADITHYA ARUN SATHVIK	11	10	10	9	10	4	4	4	4	4	3	3	3	3	3	5	28
2	1KS22CM002	ANITHA P C	10	9	12	12	8	4	4	4	4	4	3	3	3	3	3	5	37
3	1KS22CM003	ANUSH S	12	9	4	3	2	4	4	4	4	4	3	3	3	3	3	5	18
4	1KS22CM005	ARSHIYA J	12	12	12	8	10	4	4	4	4	4	3	3	3	3	3	5	43
5	1KS22CM006	ARUN L JADAVA LAMANI	3	9	7	9	1	4	4	4	4	4	3	3	3	3	3	4.5	18
6	1KS22CM007	B S AISHWARYA	11	11	11	12	12	4	4	4	4	4	3	3	3	3	3	5	40
7	1KS22CM008	B S BRUNDHA	11	6	4	12	8	4	4	4	4	4	3	3	3	3	3	4.5	18
8	1KS22CM009	BASAPUR GOPALKRISHNA	6	4	8	2	5	4	4	4	4	4	3	3	3	3	3	4.5	18
9	1KS22CM010	BASAVARAJ PATIL	7	11	12	9	8	4	4	4	4	4	3	3	3	3	3	5	31
10	1KS22CM011	BRINDA S	12	12	11	11	11	4	4	4	4	4	3	3	3	3	3	5	33
11	1KS22CM012	DEEKSHA H R	3	3	6	11	3	4	4	4	4	4	3	3	3	3	3	4.5	18
12	1KS22CM013	DEEKSHA S	12	12	12	12	12	4	4	4	4	4	3	3	3	3	3	4.5	35
13	1KS22CM014	DEEPIKA G	7	7	3	8	6	4	4	4	4	4	3	3	3	3	3	5	18
14	1KS22CM015	DINESH SHARMA B	9	11	12	12	11	4	4	4	4	4	3	3	3	3	3	5	33
15	1KS22CM016	DISHA A	12	12	12	12	12	4	4	4	4	4	3	3	3	3	3	5	42
16	1KS22CM017	GANGOTHRI P	10	10	12	11	9	4	4	4	4	4	3	3	3	3	3	5	37
17	1KS22CM018	H R CHANDANA	8	11	4	9	8	4	4	4	4	4	3	3	3	3	3	4.5	24
18	1KS22CM019	HAJIRA ANWAR	7	9	2	7	5	4	4	4	4	4	3	3	3	3	3	5	24
19	1KS22CM020	HAMEED VAJIR TERDALE	10	12	8	8	5	4	4	4	4	4	3	3	3	3	3	5	34
20	1KS22CM021	HEMANTH B R	7	6	8	8	6	4	4	4	4	4	3	3	3	3	3	4.5	26
21	1KS22CM022	HEMANTH K E	9	11	12	3	5	4	4	4	4	4	3	3	3	3	3	5	34
22	1KS22CM023	K R SHREYA	11	12	9	3	7	4	4	4	4	4	3	3	3	3	3	5	26
23	1KS22CM024	KARTHIK R JOSHI	6	5	0	2	5	4	4	4	4	4	3	3	3	3	3	4	34
24	1KS22CM025	KIRAN D	9	8	5	6	9	4	4	4	4	4	3	3	3	3	3	5	23
25	1KS22CM026	KUNDANKUMAR S	10	11	10	12	10	4	4	4	4	4	3	3	3	3	3	5	39
26	1KS22CM027	MAHALAKSHMI D	4	7	5	6	4	4	4	4	4	4	3	3	3	3	3	4.5	18
27	1KS22CM028	MANJUNATH K	8	9	3	11	8	4	4	4	4	4	3	3	3	3	3	5	33
28	1KS22CM030	MOHAMMED FAHIM R	12	12	12	12	12	4	4	4	4	4	3	3	3	3	3	5	26
29	1KS22CM031	NARASIMHA M K	12	12	12	12	12	4	4	4	4	4	3	3	3	3	3	5	18
30	1KS22CM032	NEELANJALI C	10	8	4	11	2	4	4	4	4	4	3	3	3	3	3	4.5	18
31	1KS22CM033	NIMISHA S L	12	11	12	12	9	4	4	4	4	4	3	3	3	3	3	5	30
32	1KS22CM034	NISHAL R	9	3	1	8	0	4	4	4	4	4	3	3	3	3	3	5	18
33	1KS22CM035	NITHIYA V	4	9	5	7	7	4	4	4	4	4	3	3	3	3	3	5	19
34	1KS22CM036	PAVAN R	11	11	10	12	9	4	4	4	4	4	3	3	3	3	3	5	31

#	USN	Name	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	Lab IA	SEE
35	1KS22CM037	PAVAN UMESH KULKARNI	12	12	12	12	7	4	4	4	4	4	3	3	3	3	3	5	25
36	1KS22CM038	PRAJWAL M P	9	8	5	4	5	4	4	4	4	4	3	3	3	3	3	4.5	32
37	1KS22CM039	PRUTHVIRAJ N	7	8	3	4	8	4	4	4	4	4	3	3	3	3	3	5	18
38	1KS22CM040	PUNITH K M	11	10	6	11	4	4	4	4	4	4	3	3	3	3	3	4.5	23
39	1KS22CM041	RAKSHITH M	8	8	0	2	1	4	4	4	4	4	3	3	3	3	3	5	13
40	1KS22CM042	SAI SMRITI M	9	12	5	7	9	4	4	4	4	4	3	3	3	3	3	4.75	32
41	1KS22CM043	SAKSHI SINGH	12	12	12	10	12	4	4	4	4	4	3	3	3	3	3	5	40
42	1KS22CM044	SATHVIK R P	12	10	9	7	7	4	4	4	4	4	3	3	3	3	3	5	28
43	1KS22CM045	SHREEDHANYA M S	12	11	12	12	12	4	4	4	4	4	3	3	3	3	3	5	28
44	1KS22CM046	SHREEPADA C	12	11	4	8	7	4	4	4	4	4	3	3	3	3	3	4.5	36
45	1KS22CM047	SHREYAS P	7	7	1	7	6	4	4	4	4	4	3	3	3	3	3	5	36
46	1KS22CM048	SHRIKUMAR	10	12	8	8	9	4	4	4	4	4	3	3	3	3	3	5	20
47	1KS22CM049	SNEHA B KORADAKERI	9	9	7	6	6	4	4	4	4	4	3	3	3	3	3	5	22
48	1KS22CM050	SREYASREE R JOSHI	12	8	7	12	6	4	4	4	4	4	3	3	3	3	3	5	24
49	1KS22CM051	SRILAKSHMI P Y	11	12	7	10	5	4	4	4	4	4	3	3	3	3	3	5	30
50	1KS22CM052	SRINIVASA R	11	8	10	8	6	4	4	4	4	4	3	3	3	3	3	4.5	20
51	1KS22CM053	SUHAS PRABHAKAR CHINDI	12	8	9	12	8	4	4	4	4	4	3	3	3	3	3	5	39
52	1KS22CM054	SUJAN S P	12	6	6	10	4	4	4	4	4	4	3	3	3	3	3	5	43
53	1KS22CM055	SUJITH MANNE	8	8	4	8	5	4	4	4	4	4	3	3	3	3	3	4.5	41
54	1KS22CM056	SURABHI RAO	12	12	11	12	12	4	4	4	4	4	3	3	3	3	3	5	35
55	1KS22CM057	UMME HANI	12	12	9	12	10	4	4	4	4	4	3	3	3	3	3	5	18
56	1KS22CM058	Y ISHITHA	10	10	10	8	7	4	4	4	4	4	3	3	3	3	3	5	18
57	1KS22CM059	YERABOTHULA CHAITANYA	12	11	11	12	12	4	4	4	4	4	3	3	3	3	3	5	37
58	1KS22CM060	YERRABOTHULA KIRAN	6	8	7	8	6	4	4	4	4	4	3	3	3	3	3	5	28
		60% of Maximum marks (X)	7.2	7.2	7.2	7.2	7.2	2.4	2.4	2.4	2.4	2.4	1.8	1.8	1.8	1.8	1.8	3	30
		No. of students above X	45	48	31	42	28	58	58	58	58	58	58	58	58	58	58	58	27
		Total number of students (Y)	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	62
		CO Percentage	77.586	82.76	53.45	72.41	48.28	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	43.55
			CO 1	CO 2	CO 3	CO 4	CO 5	CO 1	CO 2	CO 3	CO 4	CO 5	CO 1	CO 2	CO 3	CO 4	CO 5	Lab IA	SEE

CO	CIE	SEE	DIRECT ATTAIN	Level	COURSE EXIT	LEVEL	ATTAINMENT
CO1	86.55	43.55	65.05	3.00	97.00	3.00	3
CO2	89.66	43.55	66.60	3.00	97.00	3.00	3
CO3	72.07	43.55	57.81	2.00	97.00	3.00	2.1
CO4	83.45	43.55	63.50	3.00	97.00	3.00	3
CO5	68.97	43.55	56.26	2.00	97.00	3.00	2.1
AVERAGE							2.64

	IA	Ast	CIE LAB	IA LAB	AVG
CO1	77.59	100	100.00	100.00	86.55
CO2	82.76	100	100.00	100.00	89.66
CO3	53.45	100	100.00	100.00	72.07
CO4	72.41	100	100.00	100.00	83.45
CO5	48.28	100.00	100.00	100.00	68.97

CO Attainment Level	Significance	
Level 3	60% and above students should have scored >= 60% of Total marks	For Direct attainment, 50% of CIE and 50% of SEE marks are considered.
Level 2	55% to 59% of students should have scored >= 60% of Total marks	For indirect attainment, Course end survey is considered.
Level 1	50% to 54% of students should have scored >= 60% of Total marks	CO attainment is 90% of direct attainment + 10% of Indirect attainment.
		PO attainment = CO-PO mapping strength/3 * CO attainment.

CO ATTAINMENT

8

Co-Po Mapping Table

CO'S	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	-	1	1	-	1	1	2	-	1	2	1
CO2	3	2	2	-	1	1	-	1	1	2	-	1	2	1
CO3	3	2	3	-	1	1	-	1	1	2	-	1	2	1
CO4	3	3	3	-	1	1	-	1	1	2	-	1	3	1
CO5	3	3	3	-	1	1	-	1	1	2	-	1	3	1
AVG	3.00	2.40	2.6	-	1.00	1	-	1	1.00	2.00	-	1.00	2.60	1.00

PO ATTAINMENT TABLE

CO'S	CO Attainment	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO1
CO1	3.00	Y	3.00	2.00	2	-	1.00	-	-	1	1.00	2.00	-	1.00	2	1
CO2	3.00	Y	3.00	2.00	2	-	1.00	-	-	1	1.00	2.00	-	1.00	2	1
CO3	2.10	Y	2.10	1.40	2.1	-	0.70	-	-	0.7	0.70	1.40	-	0.70	2.1	0.7
CO4	3.00	Y	3.00	3.00	3	-	1.00	-	-	1	1.00	2.00	-	1.00	3	1
CO5	2.10	Y	2.10	2.10	2.1	-	0.70	-	-	0.7	0.70	1.40	-	0.70	2.1	0.7
Average			2.64	2.10	2.24	-	0.88	-	-	0.88	0.88	1.76	-	0.88	2.24	0.88

Course Incharge

HOD
Head of the Department
Dept. of Mechanical Engg.
K. S. Institute of Technology
Bangalore - 560 109

PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.