

Model Question Paper-I with effect from 2022-23 (CBCS Scheme)

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First/Second Semester B.E. Degree Examination**Introductionto Python Programming****TIME: 03 Hours****Max. Marks: 100**Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	With Python programming examples to each, explain the syntax and control flow diagrams of break and continue statements.	L2	08
	b	Explain TWO ways of importing modules into application in Python with syntax and suitable programming examples.	L2	06
	c	Write a function to calculate factorial of a number. Develop a program to compute binomialcoefficient (Given N and R).	L3	06
OR				
Q.02	a	Explain looping control statements in Python with a syntax and example to each.	L2	06
	b	Develop a Python program to generate Fibonacci sequence of length (N). Read N from the console.	L3	04
	c	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 Python program which reads two values from the console and calls a function DivExp.	L3	06
	d	Explain FOUR scope rules of variables in Python.	L2	04
Module-2				
Q. 03	a	Explain with a programming example to each: (ii) get() (iii) setdefault()	L2	06
	b	Develop suitable Python programs with nested lists to explain copy.copy() and copy.deepcopy() methods.	L3	08
	c	Explain append() and index() functions with respect to lists in Python.	L2	06
OR				
Q.04	a	Explain different ways to delete an element from a list with suitable Python syntax and programming examples.	L2	10
	b	Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.	L3	06
	c	Tuples are immutable. Explain with Python programming example.	L2	04
Module-3				
Q. 05	a	Explain Python string handling methods with examples: split(),endswith(),ljust(), center(), lstrip()	L2	10
	b	Explain reading and saving python program variables using shelve module with suitable Python program.	L2	06
	c	Develop a Python program to read and print the contents of a text file.	L3	04
OR				
Q. 06	a	Explain Python string handling methods with examples: join(),startswith(),rjust(),strip(),rstrip()	L2	10
	b	Explain with suitable Python program segments: (i) os.path.basename() (ii) os.path.join().	L2	05
	c	Develop a Python program find the total size of all the files in the given	L3	05

		directory.		
Module-4				
Q. 07	a	Explain permanent delete and safe delete with a suitable Python programming example to each.	L2	08
	b	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.	L3	06
	c	Explain the role of Assertions in Python with a suitable program.	L2	06
OR				
Q. 08	a	Explain the functions with examples: (i) shutil.copytree() (ii) shutil.move() (iii) shutil.rmtree().	L3	06
	b	Develop a Python program to traverse the current directory by listing sub-folders and files.	L2	06
	c	Explain the support for Logging with logging module in Python.	L2	08
Module-5				
Q. 09	a	Explain the methods <code>__init__</code> and <code>__str__</code> with suitable code example to each.	L2	06
	b	Explain the program development concept ‘prototype and patch’ with suitable example.	L2	06
	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.	L3	08
OR				
Q. 10	a	Explain the following with syntax and suitable code snippet: i) Class definition ii) instantiation iii) passing an instance (or objects) as an argument iv) instances as return values.	L2	10
	b	Define pure function and modifier. Explain the role of pure functions and modifiers in application development with suitable python programs.	L2	10

* Bloom’s Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.

Semester	II	Section	A/B/C/F
Subject	Introduction to Python Programming	Subject Code	BPLCK205B
Date	04-07-2023	Time	03.00-04.15 pm
AY	2022-23 (Even Semester)	Max. Marks	25

Q. No.	Questions	Marks	CO	Level
1	<i>List</i> the different features of Python. <i>Explain</i> the concept of String Concatenation and Replication with an example Python program. --or-- 2 <i>Explain</i> the following with examples a) Return values and Return statement b) Keyword argument	5	CO1	L1
3	<i>Explain</i> if-else and elif conditional statements in python with syntax and example programs for each. --or-- 4 <i>Illustrate</i> the 'for' looping constructs with its syntax and example program.	5	CO1	L2
5	<i>Illustrate</i> the concept of list slicing with example. <i>Differentiate</i> List and Tuples with proper code snippets. --or-- 6 <i>Explain</i> the methods of List data type in Python for the following operations with suitable code snippets for each. a) Adding values to a list b) Removing values from a list	5	CO2	L2
7	<i>Define</i> the following and <i>illustrate</i> with example program. a) Local and Global Scope b) Local and Global Variable --or-- 8 <i>Explain</i> the concept of exception handling with an example program	5	CO1	L2
9	<i>Develop</i> a python 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. --or-- 10 <i>Write</i> a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	5	CO1	L3

Semester	II	Section	A/B/C/F
Subject	Introduction to Python Programming	Subject Code	BPLCK205B
Date	05-08-2023	Time	09.30-10.45 AM
AY	2022-23 (Even Semester)	Max. Marks	25

Q. No.	Questions	Marks	CO	Level
1	<i>Demonstrate</i> the copy, move, rename and delete functions of shutil module with Python code snippet ---or---	5		
2	<i>Develop</i> a Python program to traverse the current directory by listing subfolders and files	5	CO3	L2
3	<i>Explain</i> the support for Logging with logging module in Python ---or---	5		
4	<i>Define</i> Assertions with its syntax. 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	5	CO3	L2
5	<i>Explain</i> the following with syntax and suitable code snippet: 1. Classes 2. Objects 3. Instances as return values ---or---	5		
6	<i>Explain</i> the methods <code>__init__</code> and <code>__str__</code> with suitable code example to each.	5	CO4	L2
7	<i>Define</i> pure function and modifier. Explain the role of pure functions and modifiers in application development with suitable python programs ---or---	5	CO4	L2
8	<i>Discuss</i> polymorphism and demonstrate with an python program	5		
9	<i>Develop</i> 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 ---or---	5	CO3	
10	<i>Develop</i> 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.	5	CO4	L3

Course Title	Introduction to Python Programming	Course Code	22PLC15B
Section	H, I, J, K, L, M, N, O	Semester	1 st Semester
CIE No.	I	Max. Marks	20
Date	19-01-2023	Time	2.00-3.00 pm

Course Outcome Statements: After the successful completion of the course, the students 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, reading and writing to the file
CO4	Implement the concepts of file organisation and debugging
CO5	Interpret the concepts of Object-Oriented Programming as used in Python.

Note: Answer two full questions selecting one from each Part.

Q. No	Questions	Marks	RBL	CO
PART A				
1 a	Demonstrate with an example print(), input(), len(), str(), int() and float().	5	L2	1
1 b	Define Function. Illustrate function Call, Pass, Argument and Parameter with suitable example.	5	L2	1
OR				
2 a	Explain if, else, elif, for statements in python with flowcharts and example.	5	L2	1
2 b	How exceptions are handled in Python? Write a Python program with exception handling code to solve divide-by-zero error situation.	5	L2	1
PART B				
3 a	What do the following expressions evaluate to? i. $(5-1) * ((7+1) / (3-1))$ ii. $(5 > 4)$ and $(3 == 5)$ iii. $\text{not } (5 > 4)$ iv. $(5 > 4)$ or $(3 == 5)$ v. $\text{not } ((5 > 4) \text{ or } (3 == 5))$	5	L2	1
3 b	Summarize List concatenation, Replication, updating and removing values in a list with an example.	5	L2	2
OR				
4 a	Develop a program to read the student details like USN, name and marks in three subjects. Display the student details, total marks and percentage with suitable messages.	5	L2	1
4b	What is List? Explain the following cases with suitable examples. i. Getting Individual Values in a List ii. Negative Indexes iii. Getting a List from Another List with Slices iv. Changing Values in a List	5	L2	2

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

PYthon - 02

22PLC15B

Model Question Paper-I with effect from 2022-23 (CBCS Scheme)

USN

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First/Second Semester B.E. Degree Examination

Introductionto Python Programming

TIME: 03 Hours

*looping statement
for, while*

Max. Marks: 100

Note: 01. Answer any FIVE full questions, choosing at least ONE question from each MODULE.

Module -1			* Bloom's Taxonomy Level	Marks
Q.01	a	With Python programming examples to each, explain the syntax and control flow diagrams of break and continue statements.	L2	08
	b	Explain TWO ways of importing modules into application in Python with syntax and suitable programming examples.	L2	06
	c	Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient (Given N and R).	L3	06
OR				
Q.02	a	Explain looping control statements in Python with a syntax and example to each. <i>break continue</i>	L2	06
	b	Develop a Python program to generate Fibonacci sequence of length (N). Read N from the console.	L3	04
	c	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 Python program which reads two values from the console and calls a function DivExp.	L3	06
	d	Explain FOUR scope rules of variables in Python.	L2	04
<i>Total</i>				
Module-2				
Q. 03	a	Explain with a programming example to each: (ii) get() (iii) setdefault()	L2	06
	b	Develop suitable Python programs with nested lists to explain <u>copy.copy()</u> and <u>copy.deepcopy()</u> methods.	L3	08
	c	Explain append() and index() functions with respect to lists in Python.	L2	06
OR				
Q.04	a	Explain different ways to delete an element from a list with suitable Python syntax and programming examples. <i>del remove</i>	L2	10
	b	Read a multi-digit number (as chars) from the console. Develop a program to print the frequency of each digit with suitable message.	L3	06
	c	Tuples are immutable. Explain with Python programming example.	L2	04
Module-3				
Q. 05	a	Explain Python string handling methods with examples: split(),endswith(), ljust(), center(), lstrip()	L2	10
	b	Explain reading and saving python program variables using shelve module with suitable Python program.	L2	06
	c	Develop a Python program to read and print the contents of a text file.	L3	04
OR				
Q. 06	a	Explain Python string handling methods with examples: join(), startswith(),rjust(),strip(),rstrip()	L2	10
	b	Explain with suitable Python program segments: (i) os.path.basename() (ii) os.path.join().	L2	05
	c	Develop a Python program find the total size of all the files in the given <i>dictionary</i> .	L3	05

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($N \geq 2$) complex numbers and to compute the addition of N complex numbers.	8	L2	CO4
	b.	Explain <code>__init__()</code> and <code>__str__()</code> method with examples.	6	L2	CO4
	c.	Briefly explain the printing of objects with an examples.	6	L2	CO4

	directory.		
Module-4			
Q. 07	a Explain permanent delete and safe delete with a suitable Python programming example to each.	L2	08
	b 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.	L3	06
	c Explain the role of Assertions in Python with a suitable program.	L2	06
OR			
Q. 08	a Explain the functions with examples: (i) shutil.copytree() (ii) shutil.move() (iii) shutil.rmtree().	L3	06
	b Develop a Python program to traverse the current directory by listing sub-folders and files.	L2	06
	c Explain the support for Logging with logging module in Python.	L2	08
Module-5			
Q. 09	a Explain the methods <code>__init__</code> and <code>__str__</code> with suitable code example to each.	L2	06
	b Explain the program development concept 'prototype and patch' with suitable example.	L2	06
	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.	L3	08
OR			
Q. 10	a Explain the following with syntax and suitable code snippet: i) Class definition ii) instantiation iii) passing an instance (or objects) as an argument iv) instances as return values.	L2	10
	b Define pure function and modifier. Explain the role of pure functions and modifiers in application development with suitable python programs..	L2	10

* Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.

Course Title	Introduction to Python Programming	Course Code	BPLCK105B
Course Instructors	Chandrashekhar M V, Gangamma H,Supreetha S M, Bharath H C, Dr. Ashok K ,Hemashree H C, Sahana N A, Puneeth B H	Semester/Section	1 (H, I, J, K, L, M, N, O)
Test No.	III	Max. Marks	20
Date	29/03/2023	Time	3.00-4.00 PM

Note: Answer any one full question from each Part.

Course Title	Introduction to Python Programming	Course Code	CS1001
Section	H, I, J, K, L, M, N, O	Semester	I st Semester
CIE No.	II	Max. Marks	20
Date	20/02/2023	Time	3.00-4.00 PM

Course Outcome Statements : After the successful completion of the course, the students 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	Implement the concepts of file organization and debugging.
CO5	Interpret the concepts of Object-Oriented Programming as used in Python.

Note: Answer any one full question from each Part.

Q. No.	Question	Marks	RBT Level	CO
Part A				
1a	Discuss get (), items () , keys () and values () dictionary methods in python with examples.	5	L2	2
1b	Write a function to print out a blank and filled tic-tac-toe board.	5	L2	2
OR				
2a	Develop a program to print ten most frequently appearing words in a text file.	5	L2	2
2b	What is a dictionary? Write a program to store data about your friend's Birthday using dictionary with the names as Keys and Birth dates as values.	5	L2	2
Part B				
3a	Explain the following string methods with an example. upper(), lower(), startswith(), endswith(), isalpha()	5	L2	3
3b	What are the key properties of a file? Explain in detail file reading and writing process with an example of python program.	5	L2	3
OR				
4a	What are the Absolute and Relative paths, Explain with an example.	5	L2	3
4b	With an example code, explain join () and split () string methods.	5	L2	3

RBT (Revised Bloom's Taxonomy) Levels : Cognitive Domain

L1 : Remembering	L2 : Understanding	L3 : Applying
L4 : Analysing	L5 : Evaluating	L6 : Creating