

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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Fourth Semester B.E. Degree Examinations, July 2026

OBJECT ORIENTED PROGRAMMING WITH PYTHON

Duration: 3 hrs

(CSE- AI)

Max. Marks: 100

Note: 1. Answer any FIVE full questions choosing ONE full Question from each Module.
 2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<u>Module-1</u>			
1.	a. Describe comparison operators, logical operators and bitwise operators in detail with examples.	06	(2:1:1.3.1)
	b. Define a function in python? Provide an example program to illustrate.	07	(2:1:1.3.1)
	c. Using functions write a python program to calculate the area of circle, rectangular and triangle. Print the results.	07	(3:1:1.3.1)
(OR)			
2.	a. Write python program to reverse a number and also find the sum of digits in the reversed number. Prompt the user for input.	06	(2:1:1.3.1)
	b. For a given list num=[45,22,14,65,97,72], write a python program to replace all the integers divisible by 5 with "xxx" and all integers divisible by 4 with "zzz".	07	(2:1:1.3.1)
	c. Apply exception handling mechanism to handle run time errors in python with suitable example.	07	(3:1:1.3.1)
<u>Module-2</u>			
3.	a. Explain the various collection types available in python with example.	08	(2:2:1.3.1)
	b. Discuss any six dictionary methods with example.	06	(2:2:1.3.1)
	c. Write python program to add two matrices and also find the transpose of the resultant matrix.	06	(3:2:1.3.1)
(OR)			
4.	a. Give the usage of join () and split () string methods with examples.	08	(2:2:1.3.1)
	b. Explain any six string methods with example.	06	(2:2:1.3.1)
	c. Write python code to determine whether the given string is a palindrome or not using slicing.	06	(3:2:1.3.1)
<u>Module-3</u>			
5.	a. Explain with codes reading and extracting zipped files.	07	(2:3:1.3.1)
	b. Explain with example codes how do you save variables in your python programs to binary shelf files using the shelve module.	07	(2:3:1.3.1)
	c. Explain the functions with example for the following operations:	06	(2:3:1.3.1)
	(i) To get the current working directory		
	(ii) To change the directory		
	(iii) To make a new directory		
(OR)			

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI- Performance Indicator)

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|----|----|---|----|-------------|
| 6. | a. | Explain in detail file reading/writing process with an example of python program. | 07 | (2:3:1.3.1) |
| | b. | Explain in briefly the different methods of file operations supports in python shutil module. | 07 | (2:3:1.3.1) |
| | c. | List the python codes with example for (i) deleting file (ii) deleting an empty directory (iii) deleting a directory with files | 06 | (2:3:1.3.1) |

Module-4

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|----|----|---|----|-------------|
| 7. | a. | Define class and object. Give an example for creating a class, object of that class and suitable data members of the class. | 06 | (1:4:1.3.1) |
| | b. | Build a class called point with two attributes x and y. Write following functions and demonstrate the working of these functions by creating suitable objects.
(i) To display point as an ordered pair
(ii) To find distance between two points | 07 | (2:4:1.3.1) |
| | c. | Illustrate the significance of __str__ () method with an example code snippet. | 07 | (2:4:1.3.1) |

(OR)

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| 8. | a. | What is polymorphism? Explain with an example program. | 06 | (1:4:1.3.1) |
| | b. | Write a program to create a class called Rectangle with the help of a corner point, width and height. Write following functions and demonstrate their working:
(i) To find and display centre of rectangle (ii) To resize the rectangle | 07 | (2:4:1.3.1) |
| | c. | Illustrate the significance of __init__ () method with an example code snippet. | 07 | (2:4:1.3.1) |

Module-5

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| 9. | a. | Write a program to create a PDF and also brief out steps considered. | 07 | (2:5:1.3.1) |
| | b. | Define CSV module. Write a program to read the CSV files using reader object. | 07 | (2: 5:1.3.1) |
| | c. | Write a program to create and save excel documents. | 06 | (3: 5:1.3.1) |
- (OR)**
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|----|----|--|----|-------------|
| 10 | a. | Define JSON module and explain the significance of loads () and dumps () with example code in JSON module. | 07 | (2:5:1.3.1) |
| | b. | Explain briefly the python-docx module structure and write a program to read word documents. | 07 | (2:5:1.3.1) |
| | c. | Write a program to create a word document with multiple paragraphs. | 06 | (3:5:1.3.1) |

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