



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)  
Re-accredited with A++ Grade by NAAC. Recognized by UGC Under Section 12B  
Coimbatore - 641 043, Tamil Nadu, India

**Continuous Internal Assessment Test II–October 2024**  
**SEMESTER V**

**21BITC21– Python Programming**

**Class :III UG**

**Major : Information Technology**

**CO:**

**Time : 2 Hrs**

**Max Marks : 60**

1. Demonstrate the working environment of python.
2. Develop programs using conditional statements, looping constructs and functions.
3. Devise lists, tuples, dictionaries and files in python.
4. Identify and debug errors in the program.
5. Make use of python modules for reusability.

**Part -A**

**Choose the Correct Answer**

**6 X 1 = 6**

1. What will be the output of the following code?  
`d = {'a': 1, 'b': 2}`  
`d.update({'c': 3})`  
`print(d)`  
a) {'a': 1, 'b': 2}  
b) {'a': 1, 'b': 2, 'c': 3}  
c) {'c': 3}  
d) None  
CO3 K4
2. What will be the output of the following code?  
`s = {1, 2, 3}`  
`s.add(4)`  
`s.discard(2)`  
`print(s)`  
a) {1, 3, 4}  
b) {1, 2, 3}  
c) {2, 3, 4}  
d) {1, 4}  
CO3 K2
3. What will be the output of the following code?  
`f = open("file.txt")`  
`content = f.write()`  
`print(content)`  
a) File contents  
b) None  
c) Error  
d) FileNotFoundError  
CO4 K4
4. What will be the output of the following code?  
`try:`  
`1 / 0`  
`except ZeroDivisionError:`  
`print("Division by zero")`  
a) Error  
b) None  
c) Division by zero  
d) ZeroDivisionError  
CO4 K3
5. What will be the output of the following code?  
`import re`  
`result = re.findall(r"\d+", "abc123def456")`  
`print(result)`  
a) ['abc', 'def']  
b) ['123', '456']  
c) ['abc', '123', 'def', '456']  
d) None  
CO5 K3
6. Which Python module is often used for interacting with the file system and performing file I/O operations?  
A) math                      B) re                      C) os                      D) sys  
CO5 K1

**Part – B**

**Answer the following**

**Answer should not exceed 400 words**

**3 X 6 = 18**

7. a Describe the different set operations in Python. Provide examples for each operation. CO3 K2
- (OR)
- b. Discuss the difference between mutable and immutable data structures in Python. Explain why dictionaries and sets are mutable, providing examples that demonstrate mutability. CO3 K2
- 8.a Explain the differences between **try-except** and **try-finally** blocks in Python. Discuss when you would use each and provide examples of both(OR) CO4 K2
- b Analyze the importance of error handling in Python. Discuss the advantages and challenges of using exceptions compared to traditional error-handling techniques. CO4 K2
- OR
9. a Discuss the different methods available in Python's **re** module for working with regular expressions, CO5 K3
- b Discuss the concept of namespaces in Python. CO5 K3

**Part – C**

**Answer the following**

**Answer should not exceed 800 words**

**3 X 12 = 36**

- 10ā Discuss the built-in functions and methods available for dictionaries and SET in Python(OR) CO3 K2
- b Analyze the differences between dictionaries and lists in Python, focusing on their structures and use cases. Provide specific examples to illustrate your points CO3 K2
- 11.a. Describe the role of file handling in Python. Explain how to open, read, write, and close files, and provide examples demonstrating common operations such as reading line-by-line and appending to a file.(OR) CO4 K3
- b. Given a scenario where a Python program needs to write data to an external file, write Python code to open the file, write the contents. Explain the difference between writing the contents with write and append mode. CO4 K3
- 12.a Explain the concept of modules in Python. Discuss how modules are imported and used, and provide examples of both built-in and user-defined modules(OR) CO5 K3
- b Explain the role of special symbols and metacharacters in regular expressions. Provide examples of commonly used metacharacters and describe their functions CO5 K3