



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. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment –II- March 2025
Semester-II

Class: I PG
Branch : Information Technology

Time: 2Hours
Max. Marks: 60

23MITC10–Open Source Technologies

Course Outcomes:

1. Have knowledge in advanced techniques necessary for the development of applications using PHP.
2. Develop programs connecting MySQL database with PHP.
3. Use Python for developing Open source applications.
4. Implement Python and MySQL database Connectivity.
5. Create database applications using Python and Mongo DB.

Part A

6 x 1 = 6

Choose the Correct Answer

1. Which of the following is mutable in Python? CO3 K1
a) Tuple b) List
c) Set d) Both b and c
2. What will be the output of `my_tuple = (1, 2, [3, 4]); my_tuple[2][0] = 5; print(my_tuple)`? CO3 K3
a) (1, 2, [3, 4]) b) (1, 2, [5, 4])
c) Error d) None of the above
3. Which mode is used to open a file for both reading and writing? CO4 K1
a) 'r' b) 'w' c) 'r+' d) 'a'
4. Which MySQL command is used to delete records from a table? CO4 K2
a) REMOVE b) DELETE
c) DROP d) CLEAR
5. What is the default database created when MongoDB is installed? CO5 K1
a) admin b) test
c) local d) default_db
6. Which MongoDB command is used to insert a document into a collection? CO5 K2
a) `db.collection.insertOne()` b) `db.collection.put()`
c) `db.collection.save()` d) `db.collection.store()`

Part B

3 x 6 = 18

Answer ALL questions

Each answer should not exceed 400 words or two pages

7. a Write a Python program to implement a class and an object that simulates a bank account.(OR) CO3 K2
7. b. Explain the differences between Lists, Tuples, Sets, and Dictionaries CO3 K2
- 8.a Write a Python program to read a file and count the number of lines in file CO4 K3
- 8.b. Differentiate `fetchone()`, `fetchmany()` and `fetchall()` with examples. CO4 K3
9. a Explain the key features of MongoDB and how it differs from relational databases (OR) CO5 K2
9. b Write a Python program to retrieve data from MySQL database. CO5 K4

Part C

3 x 12 = 36

Answer ALL questions

Each answer should not exceed 800 words or four pages

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| 10.a. | Describe the key concepts of Object-Oriented Programming (OOP) in Python with examples (OR) | CO3 | K3 |
| 10.b. | Explain sets and Dictionaries with examples. | CO3 | K2 |
| 11.a. | Explain file handling operations in Python with examples for reading, writing, and appending data (OR) | CO4 | K3 |
| 11.b. | Discuss exception handling in Python with a program demonstrating try, except, and finally. | CO4 | K2 |
| 12.a | Write a Python program to connect MongoDB with Python and insert a document . (OR) | CO5 | K4 |
| 12.b | Write a Python program demonstrating CRUD operations (Create, Read, Update, Delete) in MongoDB using the pymongo module. | CO5 | K4 |

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