

**CCT TEST ITEM**

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| <b>CLASS</b>   | <b>XII</b>   |
| <b>SUBJECT</b>   | <b>COMPUTER SCIENCE</b>  |
| <b>Name of the Teacher</b>   | <b>SOUMYAMOL D</b>   |
| <b>Name of the Topic/Chapter</b>   | <b>Interface of python with an SQL database</b>  |
| <b>A company's database stores employee details such as employeeid, name, department, and salary in a table named employees. Based on the above information, answer the following questions:</b> |  |
| <b>Q.1.</b>  | <p>The HR manager wants to increase the salary of all employees in the "Sales" department by 10% using a Python program that interacts with the SQL database. Which of the following Python-MySQL code snippets will correctly update the salaries of all employees in the "Sales" department?</p> <ul style="list-style-type: none"><li>a) <code>cursor.execute("UPDATE employees SET salary = salary * 1.10 WHERE department = 'Sales'")</code><br/><code>conn.commit()</code></li><li>b) <code>cursor.execute("SELECT salary * 1.10 FROM employees WHERE department = 'Sales'")</code><br/><code>conn.commit()</code></li><li>c) <code>cursor.execute("ALTER TABLE employees SET salary = salary * 1.10 WHERE department = 'Sales'")</code><br/><code>conn.commit()</code></li><li>d) <code>cursor.execute("DELETE salary FROM employees WHERE department = 'Sales'")</code><br/><code>conn.commit()</code></li></ul> |
| <b>Answer</b>  | <p>a) <code>cursor.execute("UPDATE employees SET salary = salary * 1.10 WHERE department = 'Sales'")</code><br/><code>conn.commit()</code></p>   |
| <b>Q.2.</b>  | <p>The HR manager wants to retrieve the names and employee ids of all employees who earns a salary more than 90000 using a Python program. Which of the following SQL queries embedded in Python will correctly retrieve the required information?</p> <ul style="list-style-type: none"><li>a) <code>cursor.execute("SELECT * FROM employees WHERE salary &gt; 90000")</code></li><li>b) <code>cursor.execute("SELECT employeeid, name FROM employees WHERE salary &gt; 90000")</code></li><li>c) <code>cursor.execute("SELECT employeeid AND name FROM employees WHERE salary &gt; 90000")</code></li><li>d) <code>cursor.execute("SELECT employeeid WITH name FROM employees WHERE salary &gt; 90000")</code></li></ul>   |
| <b>Answer</b>  | <p>b) <code>cursor.execute("SELECT employeeid, name FROM employees WHERE salary &gt; 90000")</code></p>  |
| <b>Q.3.</b>  | <p>The HR Manager wants to delete the records of employees who are working in "Finance" department</p>   |

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|               | <p><b>Which of the following Python code snippets correctly deletes these records from the database?</b></p> <p>a) <code>cursor.execute("DELETE FROM employees WHERE department= 'Finance' ")</code><br/> <code>conn.commit()</code></p> <p>b) <code>cursor.execute("DELETE * FROM employees WHERE department= 'Finance' ")</code><br/> <code>conn.commit()</code></p> <p>c) <code>cursor.execute("DELETE * FROM employees WHERE department= 'Finance' ")</code></p> <p>d) <code>cursor.execute("DELETE FROM employees WHERE department is 'Finance' ")</code><br/> <code>conn.commit()</code></p> |
| <b>Answer</b> | <p>a) <code>cursor.execute("DELETE FROM employees WHERE department= 'Finance' ")</code><br/> <code>conn.commit()</code></p>  |
| <b>Q.4.</b>   | <p><b>The HR manager wants to retrieve the employee names starting with the alphabet 'A'.</b></p> <p>a) <code>cursor.execute("SELECT * FROM employees WHERE name like 'A%')"</code></p> <p>b) <code>cursor.execute("SELECT name FROM employees WHERE name like 'A_')"</code></p> <p>c) <code>cursor.execute("SELECT * FROM employees WHERE name is 'A%')"</code></p> <p>d) <code>cursor.execute("SELECT name FROM employees WHERE name like 'A%')"</code></p>  |
| <b>Answer</b> | <p>d) <code>cursor.execute("SELECT name FROM employees WHERE name like 'A%')"</code></p>   |