**Question 1** - Explain the meaning of Unit testing and its difference on comparison with Functional testing, Smallest unit to test mocking dependencies.

**Answer** -> Unit Testing means that testing every function or method whether it works perfectly or not.

It tests the smallest possible parts of an Application.

Difference with functional testing-

* **Functional Testing** tests whole system or workflow whereas **Unit Testing** tests single method or unit.
* **Functional Testing** is done by Testers while **Unit testing** is done by Developers.
* **Functional Testing** doesn’t generally use Mocks or Stubs while **Unit Testing** use them often.

Mocking replaces real dependencies with Fake Objects to isolate the units which are being tested.

**Question 2** - List various types of testing-

Unit testing, Functional testing, Automated testing, Performance testing.

**Answer** -> **Unit Testing -** Test methods or components individually.

**Functional Testing -** Test features based on business need.

**Automated Testing -** Testing is done automatically.

**Performance Testing -** Test performance of application.

**Question 3 -** Understand the benefit of automated testing.

**Answer** ->Benefits of automated testing are:

**Speed**

**Repeatability**

**Early detection of errors**

**Saves time**

**Question 4** - Explain what is loosly coupled & testable design.

**Answer** -> A **loosely coupled system** is one where **classes and components do not directly depend on each other’s implementation.**

****Question 5** -** Understand the need of [SetUp], [TearDown] & [Ignore] attributes.

****Answer** -> SETUP - Initialize before each test I.e. the method written below the attribute runs before every test method.**

**TEARDOWN - Runs after each test method,used for deallocation of resources or cleanup**

**IGNORE - marks the test which should not be run.**

**Question 6** - Explain the benefit of writing parameterised testcases.

****Answer** -> TESTCASE lets us test multiple input values at a single run , also it saves a lot of time.**