**Software Development**

**Q**. What is concurrency?

A. Being able to perform multiple processes at the same time including potential interactions between them

**MQ**. What is the main advantage of threading?

MC. -Correct answer: Sharing memory space

-To allow more than one operation to occur simultaneously

-To separate memory access

-To make code cleaner and clearer

**MQ**. What is a race condition?

MC. - Correct answer: When two threads try to access/change data at the same time

-When a thread finishes before it should

-When two threads get stuck in a loop

-When a thread can’t gain regular access to a shared resource because another thread is frequently calling object methods

**Q**. What are atomic actions?

A. Self-contained actions that cannot be stopped in the middle

**Q**. What is starvation?

A. When a thread can’t gain regular access to shared resources because another thread is frequently calling the objects methods

**MQ**. What is Livelock?

MC. -Correct answer: When two threads are too busy responding to each other to do work

-When developers upload large quantities of new code to a branch and other data is overwritten

-Keeping versions of data

-Regularly merging branches to the main branch

**Q**. What is the trunk?

A. The main code base that developers are working on

**MQ**. What is a fork?

MC. -Correct answer: An independent branch of development

-When two thread fail to communicate

-A design pattern

-A kitchen implement

**Q**. What is strict locking?

A. When only one person can change a file at any one time

**Q**. What is the purpose of a design pattern?

A. To provide a general reusable solution to one type of problem during software development

**MQ**. Name the three types of generics

MC. -Correct answer: Types, methods and constructors

-Methods, arguments and constructors

-Constructors, threads and types

-Methods, objects and arguments