QUESTION 7

This question presents us with a situation where Application 1 needs to stay updated about the status of Application 2 without the direct exchange of variables during the entire time that Application 2 is operating. This kind of a problem can be solved by using a Publisher-Subscriber model wherein the applications can make use of a Message Broker to exchange information indirectly during the time where direct exchange of information is not possible. This has been shown in the diagram.

A Broker acts as the bridge between the two applications. It can be implemented via Redis, Kafka, etc. Application 2 can publish the required data to a Queue and then Application 1 can keep reading from it, thus allowing it to stay updated about the status of Application 2 indirectly. This solution works well if the frequency of Queuing and de-queuing of data is synchronized for the 2 applications. This arrangement ensures that both applications can run independent of each other i.e. problems on one end cannot affect the other application. At the same time, necessary steps need to be taken to ensure synchronization is maintained.