**3. Explain different protection modes in data guard?**

There are three modes.

**1. MAXIMUM PROTECTION**  
This mode provides maximum protection. It guarantees zero data loss. In this mode the redo/transaction data must be written to both primary redo log and standby redo log. For any reason(mostly N/W issue) if it is unable to write to standby, Then primary database will get shutdown. i.e if a user commits transaction, then that commit will not be completed, unless primary receives a confirmation that write is completed on standby.

**2. MAXIMUM AVAILABILITY:**  
It provides the highest level of data protection that is possible without affecting the availability of the primary database. Transactions are not allowed to commit until all redo data are written to the online redo logs and propagated to at least one synchronized secondary database. If for any reason, the primary database cannot propagate its redo stream to one secondary database, the primary will NOT shut down and operates as it it were in maximum performance mode until issues are fixed.

**3. MAXIMUM PERFORMANCE:(default one)**  
This is the default protection mode. With this protection mode, a transaction is committed as soon as the redo data needed to recover the transaction is written to the local (online) redo log.



