

Unit-1

QB

1. The state is given by $2i|0\rangle + i|1\rangle$, find the probability amplitude for the state $|0\rangle$
2. Define Qubit and discuss its difference with classical bit.
3. Given $2i|0\rangle + i|1\rangle$, what is the projection of this state with respect to $|1\rangle$.
4. What is $|0\rangle$ and $|1\rangle$ in terms of matrix?