

## Unit-1

### QB

1. Write the expression for the inner product of two ket vectors
2. If  $|u\rangle$  and  $|v\rangle$  are orthogonal unit vectors, what is  $\langle u+v|u-v\rangle$ ?
3. What is the norm of a state vector  $|\psi\rangle$  ?
4. If  $|v\rangle$  is normalized, what is  $P|v\rangle$  for  $P = |v\rangle\langle v|$ ?