

## Homework 9

1. (50 points) Show that Quantum CNOT gate is its own inverse

2. (100 points) Describe the actions of Quantum Pauli and Hadamard Gates.

3. (100 points) Prove the No - Clonning Theorem

4. (100 points) Describe the Bell Gate Circuit and demonstrate that it is its own reverse.

5. (100 points) Describe Superdense coding.

6. (100 points) Describe Quantum Teleportation.