

Lab5 Quantum dense coding; Quantum teleportation;

Exercise Q1 GUIDE

Implement and test quantum circuit producing Bell state

$$\frac{1}{\sqrt{2}} |00\rangle + \frac{1}{\sqrt{2}} |11\rangle$$

Exercise Q2 GUIDE

Implement and test dense quantum coding with the simulator

(hint see: Fig 6.4f <http://www.lassp.cornell.edu/mermin/qcomp/chap6.pdf>)

Exercise Q3 GUIDE

Implement and test teleportation circuit

(hint see: Fig 6.5g <http://www.lassp.cornell.edu/mermin/qcomp/chap6.pdf>)

Exercise Q4 GUIDE

Implement and test entanglement swapping

