

3

Systems Biology BME 105 (Spring 2007)
March 29, 2007 Quiz
K. Truong, M. Radisic, W. Stanford

Name: Kevin Siu

Student #: 995518462

1. [3 marks] What are the requirements for T4 DNA ligase to catalyze ligation (two 3'-5' phosphodiester bond between two DNA fragments)?

Ligation factors
\ Polynucleotide tail ends

2. [2 marks] Duchenne muscular dystrophy is a recessive disease. Why do more males have Duchenne muscular dystrophy than females?

2 The gene for the disease may be carried on the X chromosome - which males have only one copy of. Thus, a mutation in the one X chromosome will cause the dystrophy phenotype to appear for a male, while in a female, there are two X chromosomes which need to have the gene in order to express the muscular dystrophy.