

## 2. Match the following enzymes and protein to its function.

Helicase

 Synthesis RNA primer by adding RNA nucleotides using 3' end of the parental DNA strand as a template.

Single-strand binding proteins

 Recognizes the 3' OH end of the RNA primer, and adds free complementary DNA nucleotides.

Topoisomerase

 Joins the Okazaki fragments by forming phosphodiester bonds to form continuous DNA strands.

Primase

 Unwind the double strand of DNA by breaking hydrogen bonds between the nitrogenous bases.

DNA polymerase III

 Removes RNA primer and replaces it with DNA nucleotides.

DNA polymerase I

 Bind to the unwound DNA strand, and prevent them for annealing.

DNA ligase

 Relieves tension to the DNA molecule by nicking and cutting certain placed on the phosphate backbone.