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BCH 204

1. Highlight the steps of DNA replication
2. Outline the functions of DNA replication enzymes

Answers

1. Initiation(primer binding)

Elongation
Termination

2. DNA helicase: unwinds and separate double stranded DNA as it moves along the DNA. It forms the replication fork by breaking hydrogen bond between nucleotide pairs in DNA

DNA primase: a type of RNA polymerase that generates RNA primers. Primers are short RNA molecules that act as templates for the starting point of DNA replication

DNA polymerase: synthesize new DNA molecules by adding nucleotides to leading and lagging DNA strands

DNA gyrase(topoisomerase):unwinds and rewinds DNA strands to prevent the DNA from becoming tangled or supercoiled

Exonucleases: group of enzymes that remove nucleotide bases from the end of a DNA chain

DNA ligase: joins DNA fragments together by forming phosphodiester bonds between nucleotides