NAME: OGUNNIKE IYANUOLUWA. O

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QUESTION

1. Highlight the steps of DNA Replication.
2. Outline the functions of DNA Replication enzymes.
3. DNA is packed into tightly coiled chromatin, in order to fit in a cell’s nucleus. It loosens prior to replication allowing the cell replication machinery to access the DNA strands. The double helix structure has to be unzipped before replication can begin. Here are the three main steps to DNA replication:

* Initiation
* Elongation
* Termination.

1. Functions of DNA replication enzymes

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| **Enzyme** | **Function** |
| DNA protein | Recognition of origin points on DNA. |
| DNA helicase | Unwinds and rewinds DNA strands to prevent the DNA from tangling. |
| DNA C protein | Assists DNA helicase binding. |
| DNA polymerase | Elongation of the DNA strands and repairs them. |
| DNA primase | Synthesize the RNA PRIMER |
| Single-strand binding proteins | Binds to single strands |
| DNA gyrase | Release super coil constraint. |