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MATRIC NO. 18/MHS01/343

DEPARTMENT: ANATOMY

COURSE: BCH204

**ASSIGNMENT:**

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

**ANSWERS:**

1. There are three main steps to DNA replication:
2. Initiation
3. Elongation
4. Termination
5. The functions of DNA replication enzyme

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| **ENZYME** | **FUNCTIONS** |
| Topoisomerase | Relaxes the super-coiled DNA |
| DNA helicase | Unwinds the double helix at the replication fork |
| Primase | Provides the starting point for DNA polymerase to begin synthesis of the new strand. |
| DNA polymerase | Synthesizes the new DNA strand; also proofreads and corrects some errors. |
| DNA ligase | Re-joins the two DNA strands into a double helix and joins Okazaki fragments of the lagging strand. |