

1. What is the "semi-conservative model" of replication?

2. What is the origin of replication?

What is the difference in the # of origins of replication in E. coli vs. Dros. Cells. Why would it be important that Eukaryotes cells have more than one?

3. Explain a replication fork. Label where new and original strands are for below for help.

4. Describe the function or structure of each as applicable.

Helicase

Single Stranded Binding proteins

Primase (function & why is it necessary?)

DNA polymerase (describe detailed function in DNA synthesis)

DNA Ligase

Leading strand

Lagging strand

Oxaloacetate

ATPase

Figure

5. Why is the lagging strand made discontinuously or fragments?

6. Why is it important that eukaryotic cells produce the telomerase enzyme? Why do certain cells produce telomerase while others do not? Do you think telomerase causes telomerase?