**1.** What are Okazaki fragments?

A. Short lengths of RNA primase attached to the DNA during replication

B. Short sections of DNA formed during DNA replication

C. Nucleotides added by DNA polymerase I in the same direction as the replication fork

D. Sections of RNA removed by DNA polymerase III and replaced with DNA

(Total 1 mark)

**2.** What is the reason for Okazaki fragments being formed during DNA replication?

A. To enable replication of the 3′ → 5′ (lagging) strand

B. To form the template for the RNA primers

C. To initiate replication on the 5′ → 3′ (leading) strand

D. To help the DNA helicase unwinding the DNA helix

(Total 1 mark)

**3.** What happens during the formation of Okazaki fragments?

A. DNA polymerase III adds nucleotides in the 3´ → 5´ direction.

B. DNA polymerase III adds nucleotides in the 5´ → 3´ direction.

C. DNA polymerase I adds nucleotides in the 5´ → 3´ direction.

D. RNA polymerase adds nucleotides in the 3´ → 5´ direction.

(Total 1 mark)

**4.**

(a)Distinguish between RNA and DNA.

(3)

(b) Explain the process of DNA replication.

(8)

(Total 11 marks)