

Cellular processes

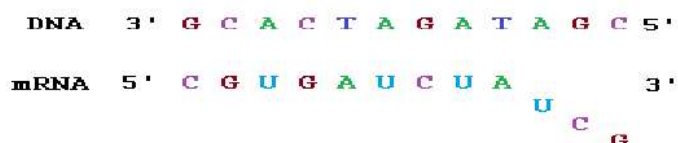
- ✓ Osmosis- This is the movement of water molecules from a region of high solute concentration to a region of low solute concentration through a semipermeable membrane.
 - o Isotonic solution refers to solution which have equal osmotic pressure across a semipermeable membrane
 - o Hypotonic solution-This is whereby there is a high concentration of solute molecules inside the cell than outside it.
 - o Hypertonic solution- This is whereby the concentration of solute molecules is higher outside the cell than inside.

There is no effect on cells when placed in isotonic solution (Kong, Yang, Wang, & Xie, 2015). When cells are placed in hypotonic solutions draws water in and swells and bulges outside. When cells are placed in hypertonic solution, they lose water and shrink.

- ✓ DNA replication

This is a process of producing an extra DNA from the original DNA as shown below. It is evidenced in living organisms and forms the basis of inheritance.

✓ DNA sequence-This is done through reversing by matching the DNA nucleotides with the RNA nucleotides or else by changing the RNA U's into DNA T's.



- o Amino acid sequence- These mRNA sequence is read by the use of ribosomes and therefore the appropriate amino acids are inserted using the protein.
- ✓ Stages of mitosis
 1. Interphase
 2. Prophase