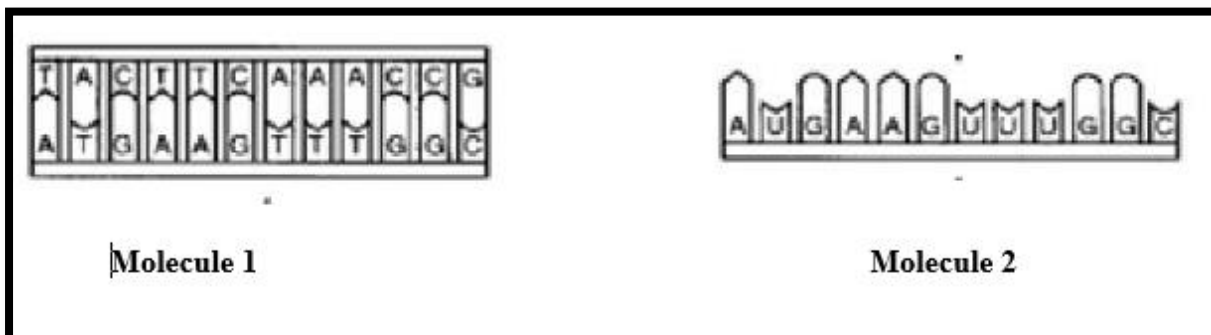


Question 1

The diagram represents molecules involved in protein synthesis.



i) State two difference between molecule 1 and 2

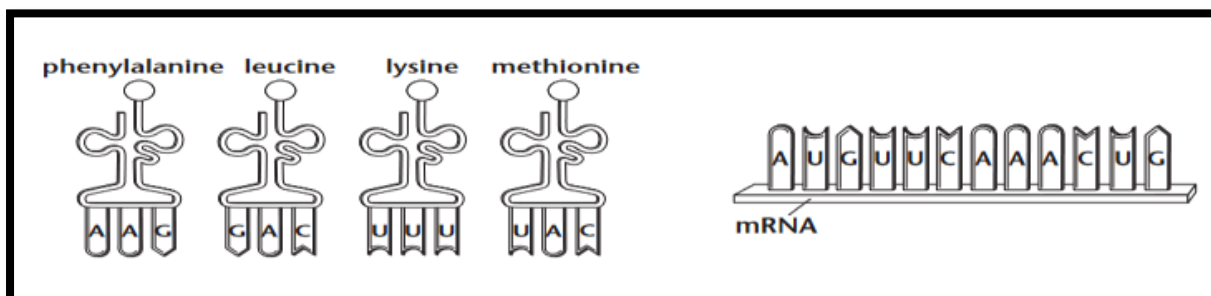
Molecule 1	Molecule 2
Double stranded	Single stranded
Deoxyribose sugar	Ribose sugar
Thymine base	Uracil base

ii) Explain how **molecule 2** works like a blueprint in constructing proteins in cell.

According to the central dogma theory, the mRNA converts the information stored in DNA into proteins. In protein synthesis process, the DNA unzips itself and expose the bases and an enzyme translates them into messenger RNA (mRNA), and it carries the instructions for making proteins.

Question 2

Refer to the diagram given below and answer the questions that follow.



i) State the anticodon for leucine - GAC

ii) State the codon for leucine - CUG

iii) List the amino acids in the order they would appear in the polypeptide coded for by the mRNA given.

methionone , phenylalanine, lysine, leucine

Question 3

Describe the role of rRNA during translation.

- Facilitates the reaction that joins the amino acids into a polypeptide chain
- rRNA binds both mRNA and tRNA to enable the process of translating mRNA's codon sequence into amino acids.