The Practise Ground

Class 11-12 Biology

DNA & Protein Synthesis

The central dogma: DNA to RNA to protein

1 Replication

DNA copies itself

Semi-conservative; each new DNA keeps one old strand

2 Transcription

DNA to mRNA

Happens in the nucleus; RNA polymerase builds mRNA

3 Translation

mRNA to protein

Ribosomes read codons; tRNA brings amino acids

4 Codon

3 bases = 1 amino acid

AUG starts; UAA, UAG, UGA stop

A-T	G-C	U	mRNA	tRNA
DNA pair	**DNA pair**	**RNA base**	**messenger**	**transfer**
2 bonds	3 bonds	not T	copy	adaptor

Remember

DNA has thymine (T). RNA has uracil (U) instead.

DNA is a double helix. RNA is usually single-stranded.

Worked example

DNA template: T A C G G A

mRNA made: A U G C C U (start codon first)

Think you've got it? Test yourself.

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