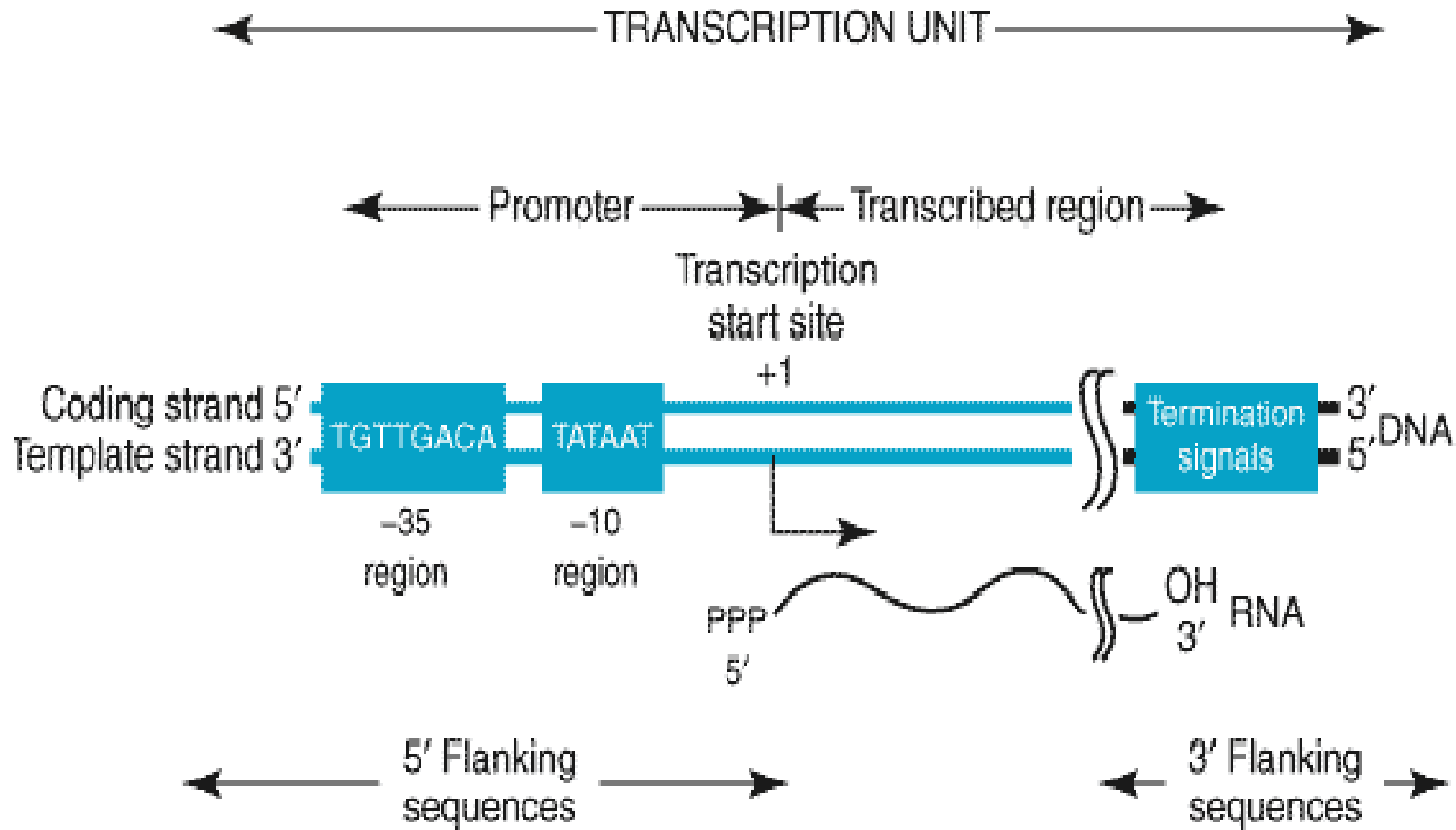




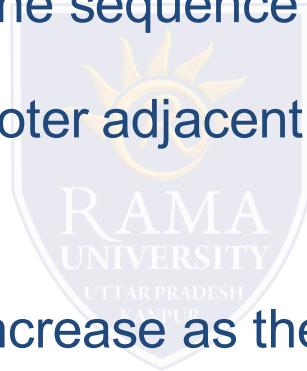
FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Transcription unit and Primary transcript



- The RNA product, which is synthesized in the 5' to 3' direction, is the **primary transcript**.
- In prokaryotes, this can represent the product of several contiguous genes
- In mammalian cells, it usually represents the product of a single gene
- The 5' terminals of the primary RNA transcript and the mature cytoplasmic RNA are identical.
- **The starting point of transcription corresponds to the 5' nucleotide of the mRNA.**

- This is designated position +1, as is the corresponding nucleotide in the DNA
- The numbers increase as the sequence proceeds *downstream*.
- The nucleotide in the promoter adjacent to the transcription initiation site is designated -1,
- These negative numbers increase as the sequence proceeds *upstream*, away from the initiation site.
- This provides a conventional way of defining the location of regulatory elements in the promoter.



Transcription unit

