

## Biology 12

DNA

## ANSWER KEY

### Steps of Protein Synthesis

1	Transcription begins
2	RNA polymerase binds to a promoter
3	DNA helix unwinds and unzips a gene segment
4	mRNA is formed by RNA polymerase
5	introns are removed from primary mRNA to create mature mRNA consisting only of exons
6	mRNA leaves the nucleus through the nuclear pores and into the cytoplasm
7	Translation begins
8	Initiation
9	mRNA binds to the small subunit of a ribosome in the vicinity of the start codon
10	Elongation
11	tRNA brings amino acids to the mRNA to lengthen the polypeptide
12	Termination
13	3 possible stop codons cause the polypeptide to detach from the ribosome
14	Polypeptide is passed to the rough ER for processing