

EXAM EXPECTATIONS
AP Biology
“Unit 10 DNA & Molecular Genetics”

SUGGEST why cancer rates increase with age

SUGGEST how two different cell types differ in structure and function yet have the same genes

DISCUSS how DNA replication results in identical copies of DNA

EXPLAIN the structure, function and roles that ATP plays in cells

EXPLAIN why transcription units often have many more nucleotides than the number of nucleotides needed to make the protein

EXPLAIN the role of introns and exons

DEDUCE the pattern of gel electrophoresis when given a model piece of DNA with its restriction sites labeled

DEDUCE amino acid sequences using an amino acid look up table

DEDUCE the smallest possible codon size given a hypothetical amount of amino acids and nucleotides

PREDICT the effects of growing e-coli in a culture that contains radioactive nucleotides (Meselson & Stahl)

PREDICT the effects of a cell that lacks telomeres

PREDICT the effects of a cell that could not produce histone proteins

PREDICT the effects of a bacterial cell that lacked restriction enzymes

PREDICT the effects on a cell that has a defective aminoacyl synthetase

PREDICT paternity and siblings from a DNA profile (fingerprint)