

# **EXAM EXPECTATIONS**

## **AP Biology**

### **“Unit 5 A-Level”**

**SUGGEST** a trait likely to be generated from sexual selection from a list of choices

**SUGGEST** why RNA is used as template for protein synthesis rather than DNA

**SUGGEST** improvements on a pest irridicating program

**DISCUSS** the significance of nearly universal genetic code

**DISCUSS** why evolution is the core theme in biology

**DISCUSS** why certain traits become more common in a population over time

**EXPLAIN** natural selection

**EXPLAIN** the theory evolution

**EXPLAIN** why scientists once believed that proteins had to be the genetic material of cells

**EXPLAIN** the lac operon

**EXPLAIN** the tryp operon

**EXPLAIN** why the one-gene-one-enzyme hypothesis is not entirely accurate

**EXPLAIN** frequency dependent selection

**EXPLAIN** heterozygote advantage

**EXPLAIN** the high incidence of the sickle cell allele in Africa

**EXPLAIN** diploidy helps to maintain variation in a population

**EXPLAIN** how advantageous adaptations come about

**EXPLAIN** natural selection can produce a perfect organism

**DEDUCE** the results from a mutation in a given metabolic pathway

**PREDICT** the number of amino acids that could be accommodated after hypothetically changing the number of bases in DNA and/or the size of the codons

**PREDICT** the outcome of a mutation that altered a regulatory gene in an operon

**DETERMINE** the sequence of bases from polypeptide sequence using a genetic look-up table

**DETERMINE** the sequence of amino acids from nucleotide sequence using a genetic look-up table