

1.B Exam Expectations

LIST characteristics and features of prokaryotic cells

LIST eukaryotic organelles

LIST mechanisms of genetic change

OUTLINE the function of eukaryotic organelles

OUTLINE origin and evolution of the mitochondria and chloroplasts

OUTLINE origin and evolution of the endoplasmic reticulum and the golgi apparatus

OUTLINE the different mechanisms of genetic change or variation

DESCRIBE convergent evolution

DESCRIBE the genomes of prokaryotes

IDENTIFY extinct and extant species from a phylogenetic tree

COMPARE in evolutionary terms two organisms that are closely related to two organisms that are not closely related

COMPARE prokaryotic and eukaryotic cells

SUGGEST the location for cellular respiration among prokaryotes

DISCUSS the reasoning behind the creation of two new and different domains

DISCUSS how molecular data and morphological data are used to classify organisms

DISCUSS the pros and cons of using molecular data and morphological data are used to classify organisms

DISCUSS maximum parsimony as it relates to the creation of phylogenetic trees

DISCUSS why biologists agree that glycolysis is an ancient metabolic pathway

DISCUSS the effect that adaptive radiation has had on earth's biodiversity

EXPLAIN how maximum parsimony is used to help distinguish between analogous and homologous traits in the creation of phylogenetic trees

EXPLAIN adaptive radiation

DEDUCE the most likely mutation when comparing amino acid sequences among different species

PREDICT the effects of a mutation and the structure and function of a protein after given information about its amino acid sequence

DETERMINE an amino acid sequence given a mRNA strand and a genetic look up table

DESIGN a phylogenetic tree from a data table of molecular data