

2002 HIGHER SCHOOL CERTIFICATE EXAMINATION
Biology

Section I – Part B (continued)

Marks

Question 25 (4 marks)

- (a) Define the concept of *punctuated equilibrium* in evolution. 1

Punctuated equilibrium is the concept that there were periods of rapid evolutionary change, followed by periods of complete stability & little change in evolution.

- (b) How does punctuated equilibrium differ from the process proposed by Darwin? 3

Darwin proposed that evolution was a gradual process, that slowly took place over millions of years. Darwin's theory relies on evidence from transitional forms that suggest the development of one group of organisms from another. Conversely, punctuated equilibrium suggests that evolutionary changes were rapid, when conditions changed, species that were not adapted became extinct & new species developed in their place.