

2002 HIGHER SCHOOL CERTIFICATE EXAMINATION

Biology

Section I – Part B (continued)

	Marks
Question 25 (4 marks)	
(a) Define the concept of <i>punctuated equilibrium</i> in evolution.	1
<i>Punctuated equilibrium is the period of fast evolution and development by a species followed by the slow periods.</i>	
(b) How does punctuated equilibrium differ from the process proposed by Darwin?	3
<i>Darwin proposed the theory of <u>gradualism</u>, that species would evolve at a gradual pace, continuing as natural selection (those best suited to their environment survive) took course. This differs from of punctuated equilibrium, as the gradual development of species was not observed, rather punctuated equilibrium was. Punctuated equilibrium shows the changing rates of evolution, as species rapidly reproduce in new environments then reach the point that they are adapted. Gradualism does not necessarily occur because of the equilibrium a species reaches once it is adapted to its environment.</i>	