Section A

Answer ALL questions (100 marks)

Question 1:
Outline and critically assess the five major human activities which you believe could result in the ‘6th mass extinction’.

(25 marks)

Question 2:
Respond to the statement that: “Continental islands start with everything yet have everything to lose; ocean islands start with nothing and have everything to gain.”
(Quammen, 1996, page 225).

(25 marks)

Question 3:
Respond to the comment, providing examples, that ‘the process of achieving greater ecological stability through trans-boundary conservation activities is also influenced by non-ecological factors’.

(25 marks)

Question 4:
Describe the different types of natural archives (deposits or records) that are available for palaeo-environmental research.

(25 marks)
Section B
Answer TWO questions from this section. Each question carries 100 marks.

Question 5:
When Wallace asked Darwin whether he planned to include evidence from humans in *The Origin*, he answered; ‘I think I shall avoid the whole subject, as so surrounded with prejudices; though I fully admit that it is the highest and most interesting problem for the naturalist’. Outline and describe the impact that humankind has had upon evolutionary and extinction processes. Focus, with examples, on both pre-historic and historical time periods.

Question 6:
Outline and critically assess the Arita and Vazquez-Dominguez (2008) model of ‘tropics as cradles’, ‘tropics as museums’ and ‘out of the tropics’ as a means of illustrating tropical rain forest species dynamics.

Question 7:
According to Charles Darwin (1809-1882), “It is not the strongest of the species that survive, not the most intelligent, but the one most responsive to change.” Outline the process of adaptive radiation. Provide examples of successful ‘radiation’ and its impact on the process of species distribution and habitat niche ‘filling’.

Question 8:
Is it all just a matter of scale and timing? Respond to this statement, in the context of, and outlining and debating the issues of phyletic gradualism versus punctuated equilibrium; and allopatric versus sympatric speciation.

Question 9:
Sole (2008:56) notes that “the speed of species loss is, sadly, very fast. Many species with low populations are simply going down slowly but inevitably to their extinction”. Outline what you believe is a possible way forward in terms of conservation measures, taking into account the various approaches, need for development, community involvement and climate change.