

2010 HIGHER SCHOOL CERTIFICATE EXAMINATION  
Biology

Section I – Part B (continued)

Question 23 (7 marks)

- (a) Use an example to explain why hybridisation within a species is carried out. 2

Hybridisation within a species is carried out to increase the quality of the product. In the case of the hybridisation of Jersey Cattle and the Sahiwal African Cattle, hybridisation is used to increase milk yield.

- (b) Use an example of a named transgenic species to discuss the social and environmental impact of this technology. 5

The transgenic species of the 'Cold Strawberries' has had an environmental and social impact. The gene of a salmon is taken, and placed into the gene of a strawberry, enabling the strawberry to grow in cold environments. The social impact is that it has enabled people in colder climates to <sup>grow and</sup> eat strawberries. However, the environmental impact is that it may affect the original taste of the strawberry and that it limits the genetic variability of this strawberry. If all ~~strawberries~~ <sup>strawberries</sup> are introduced to this, strawberries would even not be able to grow in hot climates.