

Science

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(Chapter – 9) (Heredity and Evolution)

(Class – X)

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Question 1:

Why are human beings who look so different from each other in terms of size, colour and looks said to belong to the same species?

Answer 1:

A species is a group of organisms that are capable of interbreeding to produce a fertile offspring. Skin colour, looks, and size are all variety of features present in human beings. These features are generally environmentally controlled. Various human races are formed based on these features. However, there is no biological basis to this concept of races.

Therefore, all human beings are a single species as humans of different colour, size, and looks are capable of reproduction and can produce a fertile offspring.

Question 2:

In evolutionary terms, can we say which among bacteria, spiders, fish and chimpanzees have a 'better' body design? Why or why not?

Answer 2:

Evolution cannot always be equated with progress or better body designs. Evolution simply creates more complex body designs. However, this does not mean that the simple body designs are inefficient. In fact, bacteria having a simple body design are still the most cosmopolitan organisms found on earth. They can survive hot springs, deep sea, and even freezing environment.

Therefore, bacteria, spiders, fish, and chimpanzees are all different branches of evolution.