

Take-home final

Science, Anthropology



A 140 TAKE-HOME Question The human body has the capability to adapt to genetic change, developmental adjustment, acclimatization, cultural practices with technology, numerous gene-culture changes, climate alteration, body size variations, high altitudes, dietary alteration, and infectious disease. The human body exhibits numerous biological adaptive traits to the vast range of surroundings they inhabit (Lieberman 12). The body sizes, as well as shape differences between populations, have a connection to climate adaptation.

Question 2

According to recent discoveries by scientists, *Ardipithecus ramidus* had divergent huge toes that were combined with firm feet. The species had a pelvis that demonstrated its joint tree-climbing and bipedal movement adaptations. Its skeleton reproduces a human-African primate common ancestor, which does not appear like a chimpanzee (Lieberman 34). The scientists discovered the fossils next to faunal remains that indicated this species inhabited wooded surroundings.

Question 3a (Image 2)

Scientists have established that *Australopithecus afarensis* grew fast to reach maturity earlier as compared to modern humans. This species displays characteristics that are similar to humans and apes. *Australopithecus afarensis* had a flat nose, projecting lower jaws, as well as a small brain, which is approximately a third of a modern human's brain (Lieberman 48). The species had adaptations that enabled it to live on trees along with the ground.

Question 3b (Image 2)

First, *Australopithecus afarensis* and modern *Homo sapiens* have a body that stands on two legs. Second, both these species had the ability to walk upright. Third, *Australopithecus afarensis* along with modern humans possess straight fingers (Lieberman 48).

Question 3c (Image 2)

Modern humans can implement alterations in their brain sizes and organization, which was an adaptation from *Australopithecus afarensis* to adjust behavior patterns and ways of life. This approach is necessary because the exceptional brain improvement makes a significant contribution to mental abilities related to individual knowledge (Lieberman 48).

Question 3a (Image 3)

According to scientific discoveries concerning *Homo erectus*, the species had body proportions that were similar to modern humans. *Homo erectus* possessed lengthened legs with shorter arms, which are significant adaptations that enabled them to live on land. Their adaptations explain their capability to walk and run for longer distances that were efficient in hunting and gathering (Lieberman 68). This species has been linked to originality of stone tool technologies like hand axes.

Question 3b (Image 3)

Modern humans inherited body proportions, stretched out legs, and short arms adaptations from *Homo erectus*. These adaptations have been dependable in their cultural and technological development (Lieberman 68).

Question 3c (Image 3)

Homo erectus has a connection to the beginning of stone tools, which is an adaptive trait that demonstrates innovation. Modern humans can implement

such scientific knowledge to develop innovative tools and apparatus that are reliable in different ways (Lieberman 69).

Question 4a

Homo sapiens possess highly developed brains that enable them to reason, use different languages for their communication, introspect, and have emotions. They combine their mental abilities with their erect body and forelimbs to manipulate objects (Lieberman 94). The species makes far greater application of tools as compared to other species.

Question 4b

Social organization, traditions, and self-awareness are distinctive adaptations, which modern humans share with archaic Homo sapiens (Lieberman 124).

Question 4c

The scientific awareness about the evolution and adaptive traits of Homo sapiens is essential in the adjustment of modern humans in areas that involve utilization of communication systems. Humans can use these systems for self-expression, substituting ideas, and organization.

Work Cited

Lieberman, Daniel. The Story of the Human Body: Evolution, Health, and Disease. , 2013. Internet resource.