



True, False, Can't Tell

Question 1

Answer: C, Can't Tell

It is likely that UVC rays do not reach Earth as they are on the shorter end of the spectrum and longer wavelengths pass through the atmosphere better. However, no threshold is given for attenuation and there is not enough information to conclude that UVC rays are beyond the threshold of passage through the atmosphere.

Question 2

Answer: A, True

In the first paragraph, it is stated that "Longer wavelengths penetrate further through the Earth's atmosphere and are better absorbed by our skin, and are thus more dangerous". We are also told that UVA has a longer wavelength than UVB in the previous sentence. Therefore, we can conclude that UVA is more dangerous to human skin than UVB.



True, False, Can't Tell

Question 3

Answer: B, False

The third paragraph describes the roles of melanocytes and keratinocytes in protection from UV rays. Melanocytes produce melanin, which absorbs UV rays. Keratinocytes die and cornify, and the resulting substance absorbs UV rays. Neither cell absorbs UV rays themselves.

Question 4

Answer: C, Can't Tell

Calcitriol is mentioned in the final paragraph to have a positive link to bone health. However, we cannot tell from this information whether a person with low sun exposure will have poor bone health, as there are too many steps in between. We are not told whether calcitriol is the only determinant of bone health, and we are not told whether there are other ways a person can attain calcitriol other than through sunlight. Therefore, we cannot tell whether this statement is true.