

**1. It is difficult to date Archaic *Homo sapiens* sites because:**

- A. The earth had no volcanoes then
- B. There has only been erosion since then, no deposition of new sediments
- C. The Ice Age used up all the carbon
- D. They are too recent for potassium argon dating to work, and too old for carbon 14
- E. They ate all their dead
- F. All of these are true

**2. The tools of Neandertals are called:**

- A. Acheulian
- B. Oldowan
- C. Mousterian
- D. Upper Paleolithic
- E. Magdalenian

**3. Which is TRUE about Neandertals?**

- A. The first publicized discovery was made by workmen in the Neander Valley in Germany in the 1850's
- B. concept of them as stupid, hunched-over brutes is due to erroneous reconstruction by Dubois
- C. It was every man for himself; if you got injured, you starved to death
- D. They worshiped Cave Lions
- E. They ate only vegetable food, no meat
- F. All of these are true

**4. Which is TRUE about Neandertal burials?**

- A. At Shanidar in the Near East, one was buried with flowers
- b. Some individuals lived to old age and survived broken bones, suggesting they were cared for
- C. At least some burials were made with ceremonies; individuals were laid out in a fetal position
- D. Some were buried with stone tools and animal bones
- E. The burials at La Ferrassie appear to be a family
- F. All of these are true

**5. The people we call Neandertals lived in:**

- A. Europe and the Near East
- B. Africa
- C. Asia
- D. Africa, Asia, and Europe

**5a When?**

- A. between about 250,000 and 35,000 years ago
- B. over 1 million years ago
- C. Between 500,000 and 300,000 years ago
- D. Between 30,000 and 12,000 years ago

**6. Which is TRUE about Carbon 14 dating?:**

- A. It can be used to date volcanic rocks.
- B. It is a relative dating method, not an absolute ("chronometric") one.
- C. Carbon 12 is a radioactive isotope, carbon 14 is a stable isotope
- D. It works because living organisms constantly exchange carbon with the atmosphere.
- E. It depends on the fact that each living organism uses only one of the 14 kinds of carbon.
- F. All of these are true

**7. The half-life of Carbon -14 is 5730 years; this means that:**

- A. after 11460 years, a sample would still have half of its original C-14.
- B. after 11460 years, a sample would have no C-14 left; the C-14 completely decayed away
- C. after 11460 years, a sample would still have one-fourth of its original C-14.
- D. after 11460 years, a sample would still have one-eighth of its original C-14
- E. The method cannot be used for anything older than 11460 years

**8. Which of these is TRUE about Neandertals?**

- A. A hyoid bone from the site of Kebara indicates they could talk
- B. Neandertal skeletons have been found with severe arthritis and worn out teeth
- C. Neandertals seem to have taken a special interest in giant cave bears
- D. There is some evidence that some neandertals may have practiced cannibalism
- E. Neandertals have been found associated with ochre (a color pigment), with animal bones and teeth that were made into pendants, and with what appears to be a flute
- F. All of these are true

**9. TWO POINT ESSAY – use the back:**

Describe the differences in anatomy that distinguish Neandertals from yourself (include brain and skull, teeth, and the anatomy of the rest of the body); what are the environmental and behavioral explanations for those differences?

**PRINT NAME** \_\_\_\_\_

**BONUS** What was found at the site of Sima de los Huesos ('pit of the bones') in the Atapuerca Mountains of Spain? How is this site related to Neandertals?