

Name: _____

Period: _____

Seat#: _____

The questions are in chronological order. Times are estimates. You do not need full sentences.

- 1) Where does an element take its identity from? (4:30)
- 2) How much gold (Au) is extracted per ton of rock ore? (7:30)
- 3) How much does a gold (Au) bar weigh and how much is it worth? (12:00)
- 4) Why is copper (Cu) so widely sought on the world market and New York Mercantile Exchange? (15:00)
- 5) What is copper (Cu) combined with to make bronze? (17:00)
- 6) What makes metals like Copper (Cu) conductive to electricity? (19:00)
- 7) Bronze is an alloy. What is an alloy and why are they preferable at times? (21:00)
- 8) How does the atomic arrangement of atoms lead to its crystal structure like was seen in the sample of bronze with gold (Au) and tin (Sn) atoms? (31:00)
- 9) What is the atomic number and what does the atomic number indicate? (33:00)
- 10) Most of the periodic table is made of what type of elements? (34:00)
- 11) How did early chemists like Mendeleev classify the elements? (37:00)
- 12) How is the periodic table structured with regard to elements with similar properties? (39:00)
- 13) What makes noble gases stable? (42:00)
- 14) Why is an alkali metal element like Sodium (Na) so reactive? (44:00)

Dougherty Valley HS Chemistry

NOVA Video Questions – Hunting the Elements

- 15)** What does chlorine (Cl^-) do for sodium (Na^+)? What tasty substance is produced when this happens? (47:00)
- 16)** What powers explosions and fire? (54:00)
- 17)** What elements are basic to all living things? (58:00)
- 18)** Why is Carbon (C) so good for forming the structure of life? (1:05:00).
- 19)** What are at least three (3) other elements that are used for life functions and what are their uses? (1:11:00)
- 20)** Why are cyanobacteria from places like volcanic pools so important for the production of oxygen in our atmosphere? (1:16:00)
- 21)** What was the original element formed moments after the Big Bang? What then created higher order elements? (1:18:00)
- 22)** How does silicon shape our technological reality? (1:21:00)
- 23)** How are rare earth elements like neodymium (Nd) important to our technological world? (1:26:00)
- 24)** What is an isotope like Carbon-14? (1:41:00)
- 25)** How can an isotope like Carbon-14 be used to date dead organisms? (1:43:00).
- 26)** What is an unstable radioactive isotope? (1:45:00)
- 27)** Why don't the man-made radioactive elements exist for very long? (1:57:00)