Chemistry Science Bowl Questions Toss-ups

1. Chemistry Multiple Choice:

What level of chemistry is a leaf changing color in the fall considered?

W) Symbolic Level

X) Microscopic Level

Y) Macroscopic Level

Z) No level

1. Chemistry Multiple Choice:

The study of compounds of carbon is known as

W) Biochemistry

X) Medicinal Chemistry

Y) Biological Chemistry

Z) Organic Chemistry

1. Chemistry Multiple Choice:

An electrolyte is a substance that’s present in a solution as

W) An ion

X) A photon

Y) A proton

Z) A neutron

1. Chemistry Multiple Choice:

An acid is a compound that reacts with water to form what kind of ion?

W) Oxygen

X) Hydrogen

Y) Hydroxide

Z) Nitrogen

1. Chemistry Short Answer:

Is hydrobromic solution an acid or a base?

Answer: (Strong) Acid

1. Chemistry Short Answer:

What ionic compound is produced in a neutralization reaction?

Answer: Salt

1. Chemistry Short Answer:

Balance the equation: NaBr + Cl2 🡪 NaCl + Br2

Answer: 2 NaBr + Cl2 🡪2 NaCl + Br2

1. Chemistry Multiple Choice:

Gases are examples of what kind of matter?

W) Small matter

X) Bulk Matter

Y) Big matter

Z) Long matter

1. Chemistry Multiple Choice:

Who’s law is this: For a fixed amount of gas under constant pressure, the volume varies linearly with the temperature?

W) Charles

X) Boyle

Y) Dalton

Z) Newton

1. Chemistry Multiple Choice:

What kind of system is an ice pack for injuries?

W) Open System

X) Isolated System

Y) Closed System

Z) Wide System

1. Chemistry Multiple Choice:

What’s an alternative name for Aluminum Oxide?

W) Aluminia

X) Aluma

Y) Alma

Z) Alumina

1. Chemistry Multiple Choice:

Nanomaterials contain which of the following?

W) Nanoparticles

X) Microparticles

Y) Miniparticles

Z) Picoparticles

1. Chemistry Short Answer:

Give an example of a transmutation of elements

Answer: Any element into any element

1. Chemistry Multiple Choice:

Which is the most radioactive element?

W) Oxygen

X) Carbon

Y) Cobalt

Z) Plutonium

1. Chemistry Multiple Choice:

When the difference in electromagnetism in a bond between two different electrons is over 0.5, what kind of bond is it?

W) Polar Covalent

X) Nonpolar Covalent

Y) Ionic

Z) Metallic

1. Chemistry Multiple Choice:

What substance is required to shield from γ (gamma) rays of radiation?

W) Lead

X) Paper

Y) Aluminum

Z) Copper

1. Chemistry Multiple Choice:

How much stronger is a γ (gamma) ray’s relative penetration power than a β (Beta) ray’s penetration?

W) 10 times stronger

X) 100 times stronger

Y) 1000 times stronger

Z) 10000 times stronger

1. Chemistry Short Answer:

If element 134 did exist, what would its scientific name be?

Answer: Untriquadium

1. Chemistry Multiple Choice:

What can a radioisotope be used for?

W) Cure disease

X) Destroy pests

Y) Generating electricity

Z) Nuclear weapons

1. Chemistry Multiple Choice:

In the formula *E = mc2*, what does *c* represent?

W) Weight

X) Speed of light

Y) Mass

Z) Temperature

1. Chemistry Multiple Choice:

If R represents the constant of proportionality, what is the expression of the **Ideal Gas Law**?

W) PV = *n* / (RT)

X) PV = *n*RT

Y) V = *n*RTP

Z) P = R/*n*TV

1. Chemistry Multiple Choice:

What are dipoles used for?

W) To show change in temperature

X) To show change in mass

Y) To show partial charge

Z) To show charges of over 1 or less than -1

1. Chemistry Multiple Choice:

What does the symbol Delta (Δ) mean?

W) Increase amount of heat

X) Reduce amount of heat

Y) Electricity

Z) Change

1. Chemistry Short Answer:

The number of nucleons in a specific isotope is called:

Answer: Mass number

1. Chemistry Multiple Choice:

An atomic mass is:

W) The average numbers of nucleons in all the isotopes of that element

X) The number of nucleons in a specific isotope

Y) The number of protons

Z) The number of electrons