Science Bowl Questions

Biology *multiple choice* Which of the following cell organelles does not take part in cellular division?

W) ribosomes

X) chromosomes

Y) mitotic spindle

Z) cytoplasm

Biology *multiple* choice: During Mitosis, the cell duplicates its which of the following?

W) Nucleotides

X) Chloroplasts

Y) Chromosomes

Z) Centrosomes

Answer: B) Chromosomes

Biology *short answer:* What is the study of the biology and systems of the Plant kingdom known as?

Answer: Botany

Biology *multiple choice* Which of the following is not a phase of mitosis?

W)Interphase

X) Prophase

Y)Telophase

Z) Cytophase

Answer: W) Prophase

Chemistry *short answer* The formula C2H3O2 – refers to what ion?

Answer: Acetate

Chemistry *multiple choice* The identity of an element is determined by which of the following?

W) the number of its protons

X) the number of its neutrons

Y) the number of its electrons

Z) the atomic mass

Answer: W) the number of its protons

Chemistry *short answer*

Chemistry *multiple choice* Which of the following is Avogadro’s number

W) 6.01 x 10^22 mol

X) 6.2 x 10^23 mol

Y) 6.02 x 10^23 mol

Z) 6.22 x 10^22 mol

Answer: Y) 6.02 x 10^23 mol

Earth & Space Science *multiple choice* Granite is an example of a rock where:

W) fossils are commonly found

X) fossils are not found at all

Y) fossils are rarely found

Z) certain processes need to occur for fossils to appear

Answer: Y) fossils are rarely found

Earth & Space Science *short answer* During an eclipse, what is known as the innermost and darkest part of a shadow, where the light source is completely blocked by the occluding body.

Answer: Umbra

Earth & Space Science *multiple choice* According to which of the following astronomer’s laws, the cube of the mean distance of a planet from the sun is proportional to the square of the period.

W) Johannes Kepler

X) Nicholas Copernicus

Y) Tycho Brahe

Z) Galileo Galilei

Answer: W) Johannes Kepler

Earth & Space Science *short answer* What planet in our solar system is most similar to Venus?

Answer: Earth

Earth & Space Science *multiple choice* Topaz is what number hardness on Moh’s Hardness Scale?

W) 6

X) 8

y) 3

Z) 7

Answer: X) 8

Energy *short answer* What gas is natural gas mainly composed of?

Answer: Methane

Energy *multiple choice* Which country has the highest coal production in the world?

W) Russia

X) China

Y) India

Z) United States

Answer: X) China

Energy *short answer* What determines whether crude oil is called sweet or sour?

Answer: It’s sulfur content

Energy *multiple choice* Which of the following is NOT an example of renewable types of energy?

W) Biomass and Solar

X) Geothermal and Solar

Y) Solar and Hydro-Electric

Z) Coal and Gas

Answer: Z) Coal and Gas

Physics *short answer* What is the SI unit of pressure?

Answer: Pascal

Physics *short answer* Who are the two people credited with being the fathers of phsyics?

Answer: Albert Einstein and Sir Isaac Newton

Physics *multiple choice* When the volume of gas is increased, the pressure is..?

W) increases

X) decreases

Y) stays the same

Z) increases and decreases

Answer: X) decreases

Physics *short answer* What is the fourth form of matter, besides solid, liquid and gas?

Answer: Plasma

Math *short answer* What is the sum of the first 100 whole numbers?

Answer: 5050

Math *multiple choice* Which mathematician was the first to prove there are infinitely many prime numbers?

W) Isaac Newton

X)David Hilbert

Y)Archimedes

Z) Euclid

Answer: Z) Euclid

Math *short answer* How many edges does a tetrahedron have?

Answer: 6 edges

Math *short answer* What is natural log ln[e] equal to?

Answer: 1