Unit 2 Test: Spring 2015

30 MC – Each worth 2 pts

1. A book is sitting on the table, not moving. What could be said about the forces acting on the book?

A) The forces are unbalanced B) The forces are balanced

C) The book could fall off the table D) The book will never move

1. Mr. Seaford discovers a new element, Hartamonium. This element has 613 protons, 21 neutrons, and 613 electrons. What is its **atomic** **mass**?

A) 613 B) 21

C) 634 D) 579

1. Hafnium is a

A) Metal B) Nonmetal

C) Metalloid C) Compound

1. If forces are balanced, the net force is equal to:

A) 0 B) 1

C) 2 D) 3

1. Which two subatomic particles make up the atomic mass?

A) protons, electrons B) protons, neutrons

C) neutrons, electrons D) trick question – its all three

1. True/False: The atomic mass is determined by the average weight of all of an element’s **isotopes**.

A) True B) False

1. Student X pushes left on a box with a force of 4N. Student Z pushes right on a box with a force of 6N. What will happen to the box?

A) The box will go flying into the air B) The box will move left

C) The box will move right D) The box will not move

1. Which describes a NORMAL atom with anatomic number of 9?

A) 10 protons, 9 neutrons B) 9 protons, 10 neutrons

C) 4 protons, 5 neutrons D) 3 protons, 3 neutrons

1. The tendency of an object to resist any change in its motion

A) Momentum B) Inertia

C) Acceleration

1. Magnesium has an oxidation number of

A) +2 B) +1

C) +3 D) -1

1. A child is trying to get a stubborn horse to walk with them. The child is pulling but the horse IS NOT moving. What could be said about the forces between the child and horse?

A) Unbalanced, kid has more force B) Forces are balanced

C) Unbalanced, horse has more force D) Not enough info to tell

1. What acts in the opposite direction of an objects motion

A) Friction B) Force

C) Momentum D) Inertia

1. Ions with a positive charge are known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A) Isotopes B) Cations

C) Anions C) Radioactive

1. Who discovered the three main laws of motion?

A) Bohr B) Newton

C) JJ Abrams D) Dalton

1. A car accelerates from rest to 40 km/s in 4.9 s. What is the car's acceleration?

A) 8.2 km/s2 B) 8.8 km/s2

C) 7.2 km/s2 D) 9.0 km/s2

1. Which element is diatomic?

A) K B) Br

C) Mg D) F

1. Which is NOT a type of kinetic friction

A) Rolling B) Static

C) Sliding D) Fluid

1. Which family is highly reactive in water and soft enough to cut with a butter knife?

A) Alkali Metals B) Alkaline Earth Metals

C) Noble Gases D) Transition Metals

1. An object will remain in motion until a force acts to stop it.

A) Newton’s 1st law of motion B) Newton’s 2nd Law of motion

C) Newton’s 3rd law of motion

1. Which family is reactive and consists of many important minerals?

A) Alkali Metals B) Alkaline Earth Metals

C) Noble Gases D) Transition Metals

1. True/False: Friction can be increased by roughing up a surface (ie: sanding a fridge before applying paint)

A) True B) False

1. An anion has:

A) More electrons than protons B) More protons than electrons

C) Equal protons and electrons D) A positive charge

1. Mr. Seaford discovers a new element, Hartamonium. This element has 613 protons, 21 neutrons, and a mass of 634. What is its **atomic** **number**?

A) 613 B) 21

C) 634 D) 579

1. I would rather carry my 20lb dog upstairs rather than my 40lb nephew.

A) Newton’s 1st law of motion B) Newton’s 2nd Law of motion

C) Newton’s 3rd law of motion

1. An atom that has lost or gained one or more electrons and has become positively or negatively charged is known as what?

A) Radioactive B) Isotopes

C) Neutral D) Ion

1. The product of an objects mass and velocity

A) Momentum B) Inertia

C) Acceleration

1. This type of friction is what makes a couch so hard to push at the beginning
2. Sliding B) Static

C) Rolling D) Fluid

1. An isotope of Helium has an atomic number of 2 and an atomic mass of 6. How many protons and neutrons does this isotope have?

A) p: 2, n: 6 B) p: 6, n: 4

C) p: 6, n: 2 D) p: 2, n: 4

1. An object with a mass of 19.91 kg experiences a force of 13.65 N. What is the acceleration of the object?

A) 1.45 m/s/s B) 271.77 m/s/s

C) 0.68 m/s/s D) 6.57 m/s/s

1. What is the mass of a truck if it produces a force of 14,000 N while accelerating at a rate of 5 m/s2?

A) 70,000 kg B) 2,800 kg

C) 28 kg D) 147 kg

1. Chlorine has an oxidation number of

A) +1 B) -1

C) +2 D) -3

1. Which family is highly nonreactive and has a complete octet (8 outside electrons)?

A) Alkali Metals B) Alkaline Earth Metals

C) Noble Gases D) Transition Metals

1. Angelica has a car that accelerates at 5 m/s2. If the car has a mass of 1500 kg, how much force does the car produce?

A) 750 N B) 300 N

C) 30000 N D) 7500 N

1. What friction did Egyptians utilize when they would place logs under large rocks to help move them?

A) Sliding B) Static

C) Rolling D) Fluid

1. Every action has an equal and opposite reaction.

A) Newton’s 1st law of motion B) Newton’s 2nd Law of motion

C) Newton’s 3rd law of motion