

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Seat#: \_\_\_\_\_

<http://tinyurl.com/modernmarvelsacid>

- 1) The U.S. manufacturer's approximately \_\_\_\_\_ tons of acid per year.
- 2) List some products that are manufactured using acids.
- 3) \_\_\_\_\_ acid is one of the most dangerous acids and is the primary catalyst in the 3,000,000 tons of explosives detonated annually in North America.
- 4) \_\_\_\_\_ is the leading explosive used in civil construction.
- 5) \_\_\_\_\_ is the key ingredient used by the military in explosives.
- 6) Superficial nitric acid burns begin in approximately \_\_\_\_\_ seconds and 3rd degree burns begin in approx. \_\_\_\_\_ seconds
- 7) C-4 is made of approximately \_\_\_\_\_% of RDX, which is made from nitric acid.
- 8) Most of the nitric acid produced goes into the production of \_\_\_\_\_ (chemical formula) fertilizer.
- 9) This fertilizer can also be used as an \_\_\_\_\_ for explosives.
- 10) In 1947, a freighter packed with ammonium nitrate fertilizer exploded in Texas City and killed \_\_\_\_\_ people and another 5,000 were injured. This disaster is considered the worst industrial accident in the history of the United States.

- 11) \_\_\_\_\_ acid is stronger than nitric acid and is the leading chemical produced in the United States.
- 12) Why is sulfuric acid considered a strong acid?
- 13) Why shouldn't water be added to acid?
- 14) List some observations when the aluminum foil and sulfuric acid reacted:
- 15) What happens to sugar when sulfuric acid is added to it?
- 16) The Mosaic company produces \_\_\_\_\_ tons of sulfuric acid per day, which is comparable to the weight 17,000 automobiles.
- 17) List some uses of sulfuric acid.
- 18) Describe the process for producing sulfuric acid.
- 19) Why do your eyes water when cutting onions?

**20)** How long does it take for acid to dissolve a body?

**21)** What acid is produced in your stomach to dissolve food?

**22)** How is gelatin produced?

**23)** List some products that are produced with gelatin.

**24)** What type of acid is found in cola?

**25)** How many tons of vinegar are consumed in a year?

**26)** \_\_\_\_\_ is also known as "mother of vinegar."

**27)** \_\_\_\_\_ acid is used to make "sugar of lead."

**28)** What are the key ingredients (acids) in the electropolishing vats?

**29)** During electropolishing, acid reacts with chromium to form a protective layer of \_\_\_\_\_ that passivates stainless steel keeping it sterile.

**30)** What catalysts are used in the production of gasoline and jet fuel?

**31)** Why is sulfuric acid used to recover platinum?

**32)** What is the name of the acid cocktail used to dissolve precious metals?

**33)** What acids are found in acid rain?

**34)** Acid rain has a similar pH to:

**35)** What is another name for hydrochloric acid?

**36)** What happens to mustard gas when inhaled?

**37)** In the Middle Ages, goldsmiths used acid to \_\_\_\_\_, one of the earliest known applications of acid etching.

**38)** More people have died in Yellowstone due to \_\_\_\_\_ than from bear attacks.

**39)** Thermoacidophiles produce \_\_\_\_\_ that protect them from acidic conditions.

**40)** Hyperthermophiles produce an enzyme that is being synthesized to produce clean burning \_\_\_\_\_ from corn