Exam 1 (Chapters 1, 2) NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VERSION 1 SUMMER ‘17 Good luck!

1. Name the following compounds:

Co(NO2)2

H3PO4

1. Give the formula for the following compounds:

Hydrosulfuric acid

Sodium oxide

1. Write your answer to the appropriate number of significant figures:

Show work using the underline method.

(2.853 x 107) – (1.200 x 103) x 2.8954 ­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A match is lit and held under a cold piece of metal. Label the following observations as chemical or physical changes:

The match burns \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The metal gets warmer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Water condenses on the metal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Soot (carbon) is deposited onto a piece of metal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The concentration of carbon monoxide in an apartment is 24 micrograms/m3. What mass of carbon monoxide in grams is present in a room measuring 10.6 ft x 14.8 ft x 20.5 ft. (2.54 cm = 1 in; 12 in = 1 ft)

All work must be shown and must be clear, neat, and have UNITS!

1. A package of aluminum foil contains 25 ft2 of foil, which weighs about 4.0 oz. Aluminum has a density of 2.70 g/cm3. What is the thickness of the foil in millimeters? (2.54cm = 1in; 12in = 1ft; 16oz = 1lb; 2.21lbs = 1kg)

All work must be shown and must be clear, neat, and have UNITS!

1. Fill in the table:

|  |  |  |  |
| --- | --- | --- | --- |
| Isotopic Notation | 31P3- |  |  |
| Protons |  | 50 |  |
| Neutrons |  | 69 | 118 |
| Electrons |  | 46 | 76 |
| Net Charge |  |  | 3+ |

1. Only two isotopes of copper exist: Cu-63 (69.17%; 62.9296amu) and Cu-65. Calculate the atomic mass of Cu-65 and record your answer to four places past the decimal.

All work must be shown and must be clear, neat, and have UNITS!

Recall that: (Fractional abundance A x Mass A) + (Fractional abundance B x Mass B) = Avg. Atomic Weight

Exam 1 (Chapters 1, 2) NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

VERSION 2 SUMMER ‘17 Good luck!

1. Name the following compounds:

N2H4

Ba3N2

1. Give the formula for the following compounds:

Zinc fluoride

Selenium tetrabromide

1. Write your answer to the appropriate number of significant figures:

Show your work using the underline method.

863 x [1255 – (3.45 x 108) ] ­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A match is lit and held under a cold piece of metal. Label the following observations as chemical or physical changes:

The match burns \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The metal gets warmer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Water condenses on the metal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Soot (carbon) is deposited onto a piece of metal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The concentration of carbon monoxide in an apartment is 48 micrograms/m3. What mass of carbon monoxide in grams is present in a room measuring 10.6 ft x 14.8 ft x 20.5 ft. (2.54 cm = 1 in; 12 in = 1 ft)

All work must be shown and must be clear, neat, and have UNITS!

1. A package of aluminum foil contains 50 ft2 of foil, which weighs about 8.0 oz. Aluminum has a density of 2.70 g/cm3. What is the thickness of the foil in millimeters? (2.54cm = 1in; 12in = 1ft; 16oz = 1lb; 2.21lbs = 1kg)

All work must be shown and must be clear, neat, and have UNITS!

1. Fill in the table:

|  |  |  |  |
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| Isotopic Notation | 31P3- |  |  |
| Protons |  | 50 |  |
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1. Only two isotopes of copper exist: Cu-63 (69.17%; 62.9296amu) and Cu-65. Calculate the atomic mass of Cu-65 and record your answer to four places past the decimal.

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