

(1.) Please name the following compounds using Stock nomenclature where appropriate:  
(10 x 2 points)

- (a)  $\text{Sr}(\text{CN})_2$                       (b)  $\text{Ba}_3\text{N}_2$                       (c)  $\text{NH}_3$                       (d)  $\text{H}_2\text{CO}_3$                       (e)  $\text{PCl}_5$   
(f)  $\text{N}_2\text{O}_5$  (g)  $\text{HBr}(\text{aq})$                       (h)  $\text{CrSO}_4$                       (i)  $\text{LiF}$                       (j)  $\text{Al}(\text{OH})_3$

(2.) Please formulate the following compounds: (10 x 2 points)

- (a) potassium phosphate                      (b) cesium phosphide                      (c) ferrous bromide  
(d) aluminum perchlorate                      (e) calcium carbonate                      (f) oxygen difluoride  
(g) manganese(III) selenide                      (h) sulfur trioxide                      (i) stannic sulfide  
(j) methane

(3.) Please "match the pairs" by writing the matching letter in the space given, using each letter once only: (10 x 1 points)

- |                     |                                  |
|---------------------|----------------------------------|
| _____ $\text{Cl}_2$ | (A) milligram                    |
| _____ Group I       | (B) atoms sharing electrons      |
| _____ electron      | (C) two significant figures      |
| _____ biochemistry  | (D) attracted to proton          |
| _____ Ne            | (E) SI units of temperature      |
| _____ K             | (F) chemistry and biology hybrid |
| _____ 0.050         | (G) halogen                      |
| _____ molecules     | (H) protons and neutrons         |
| _____ $10^{-3}$ g   | (I) noble gas in signs           |
| _____ nucleus       | (J) alkali metals                |

(4.) Please interconvert the units of the following quantities, as designated: (6 points)

- (a) 902 mL -----> gal                      (b)  $1.63 \text{ g/cm}^3$  ----->  $\text{lb/ft}^3$   
(c)  $5000 \text{ mm}^2$  ----->  $\text{in}^2$                       (d)  $1.63 \text{ g/cm}^3$  ----->  $\text{lb/L}$   
(e) 1.32 kg -----> oz                      (f)  $-40 \text{ }^\circ\text{F}$  ----->  $^\circ\text{C}$

Given Units:  $39.37 \text{ in} = 1 \text{ m}$ ;  $2.54 \text{ cm} = 1 \text{ in}$ ;  $453.6 \text{ g} = 1 \text{ lb}$ ;  $1 \text{ oz} = 28.35 \text{ g}$ ;  
 $12 \text{ in} = 1 \text{ ft}$ ;  $1 \text{ gal} = 3.785 \text{ L}$ ;  $t_F = (9/5)t_C + 32$ ;  $T_K = t_C + 273$ ;  $1 \text{ mL} = 10^{-3} \text{ L}$ ;  
 $2.205 \text{ lb} = 1 \text{ kg}$ ;  $16 \text{ oz} = 1 \text{ lb}$