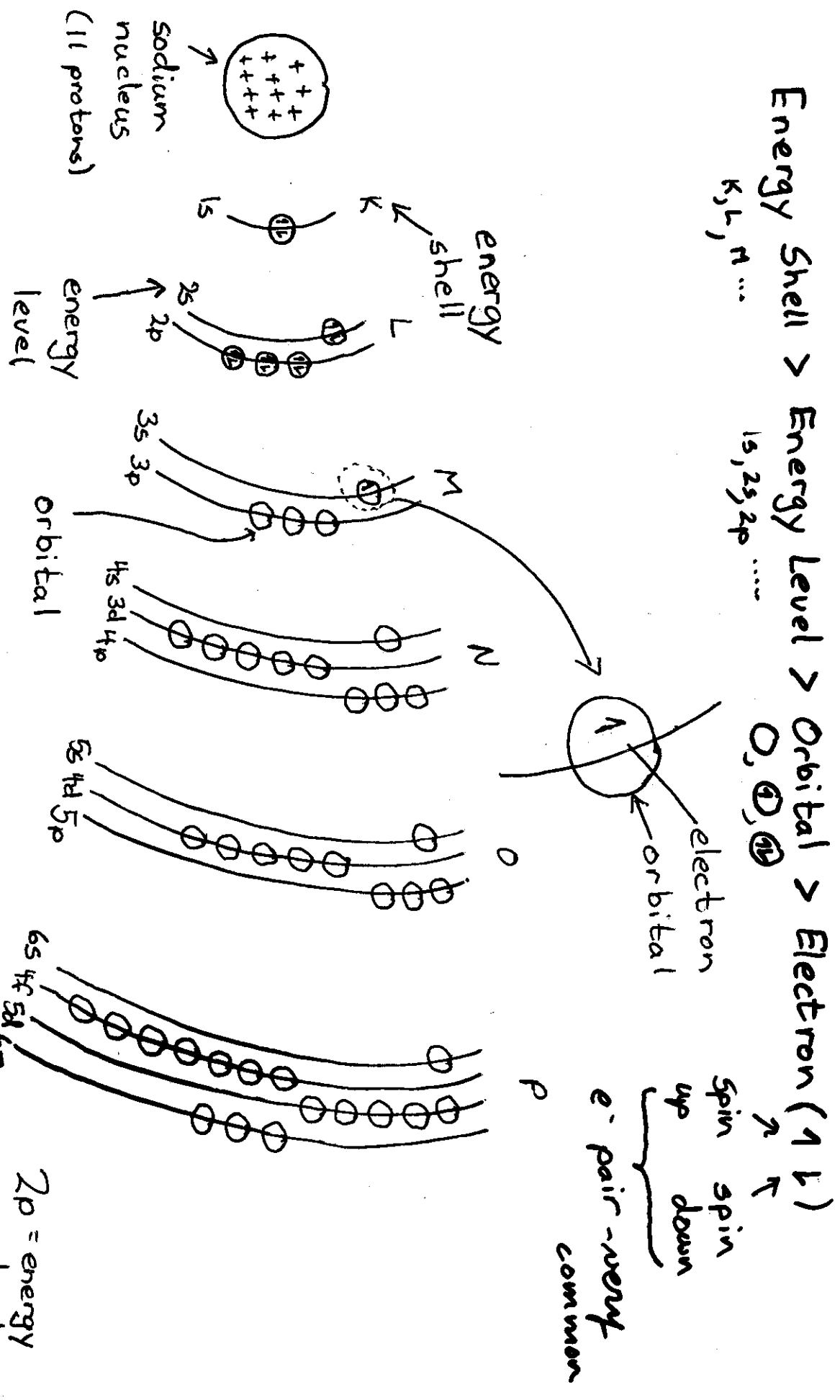


Atomic Structure

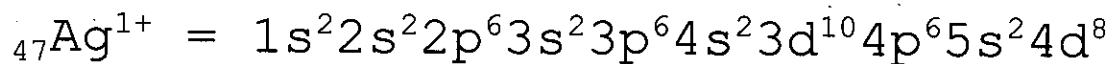
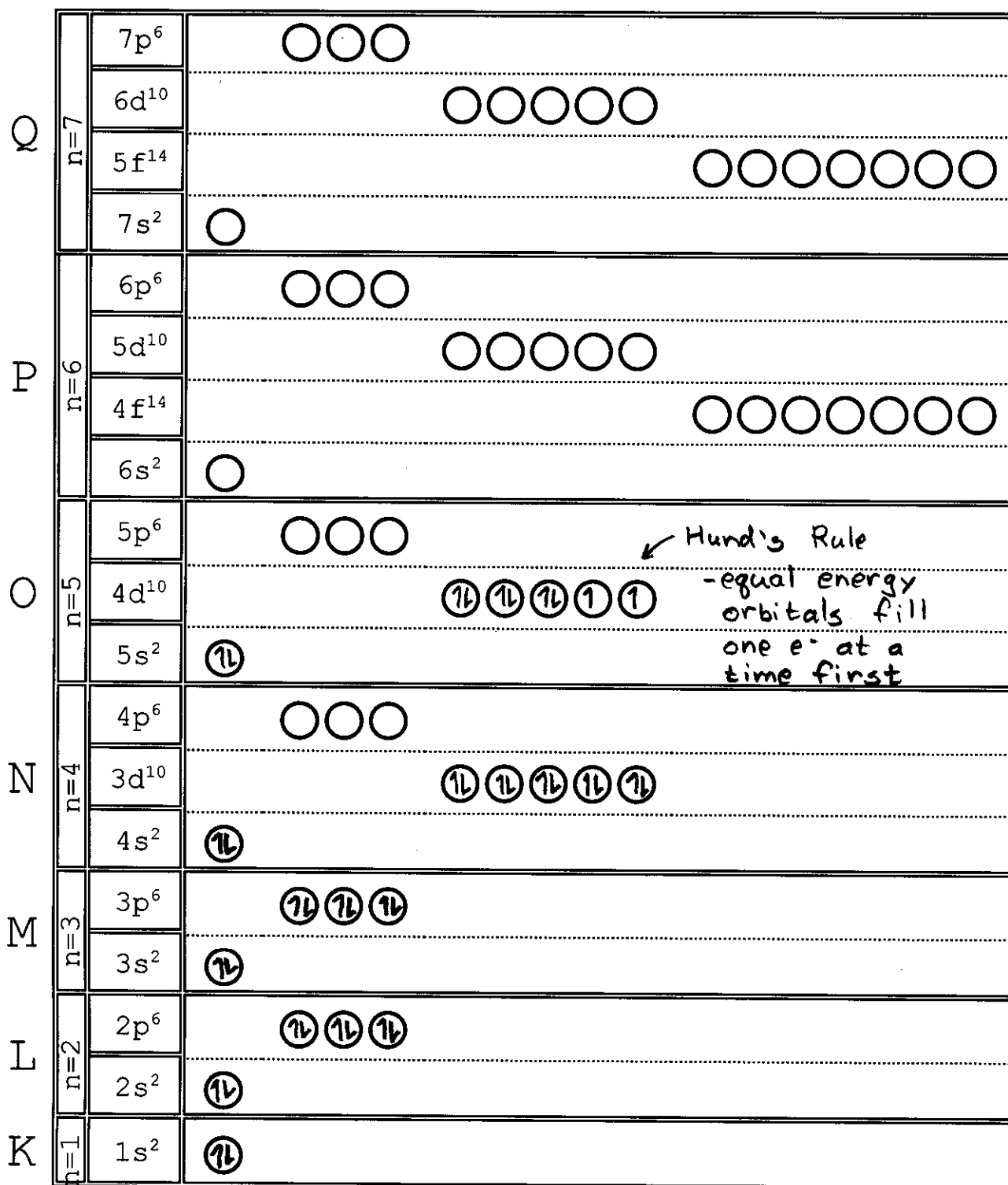


Electron Configuration: $1s^2 2s^2 2p^6 3s^1$

statement of orbital occupancy

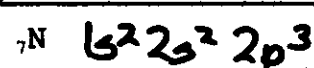
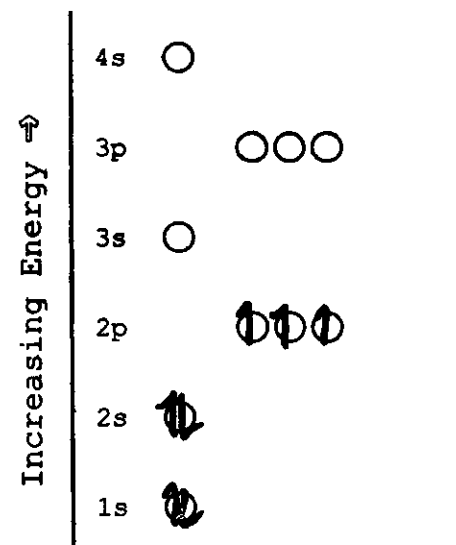
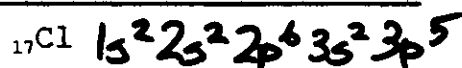
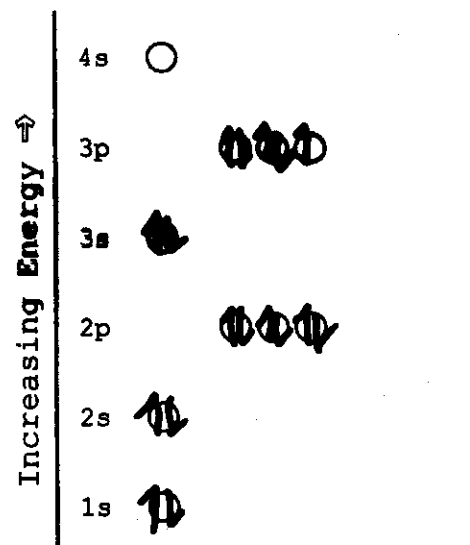
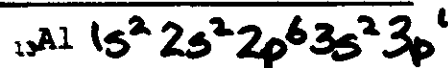
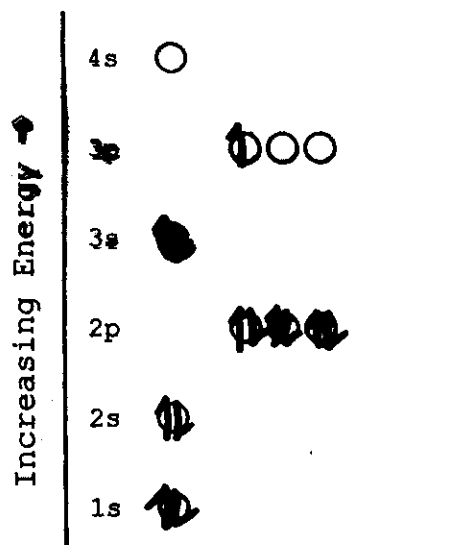
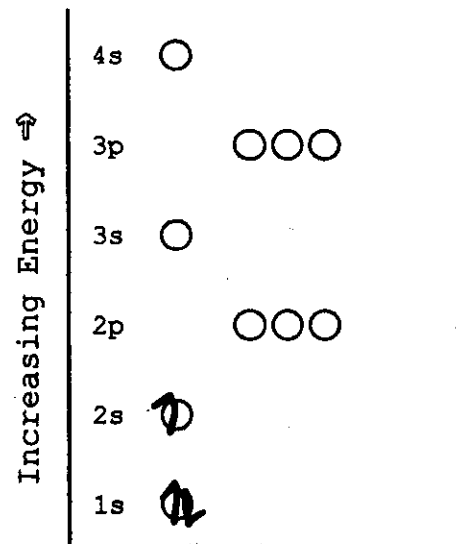
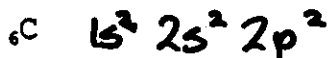
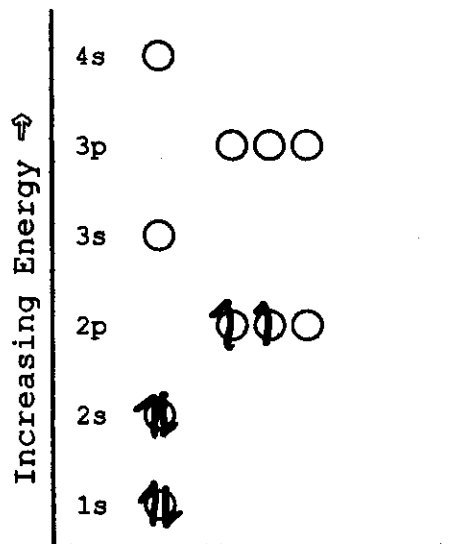
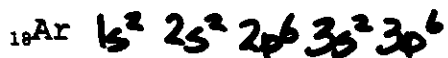
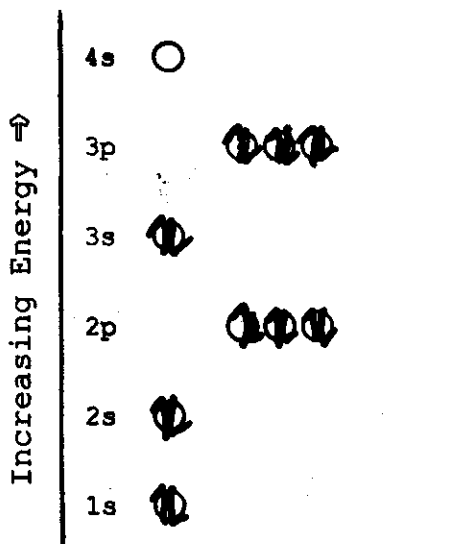
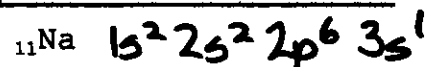
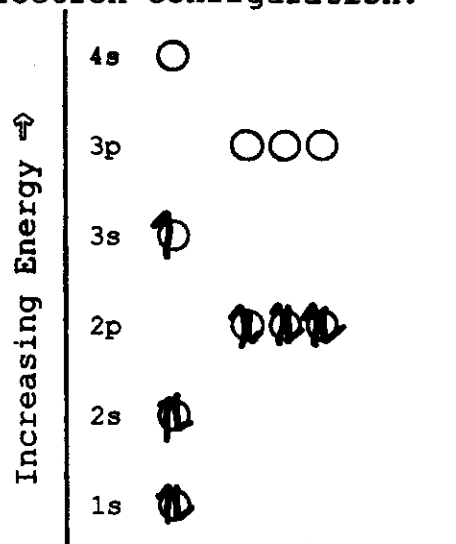
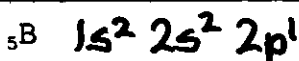
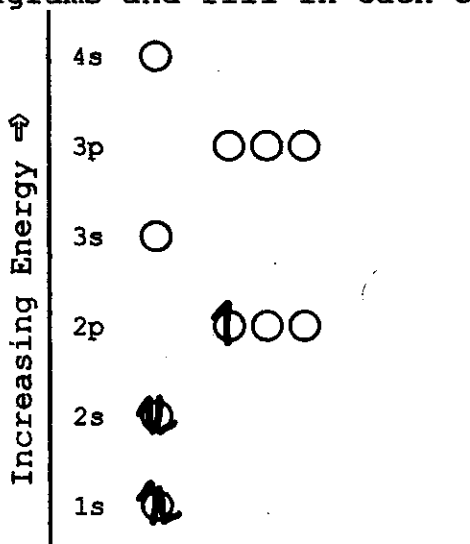
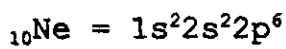
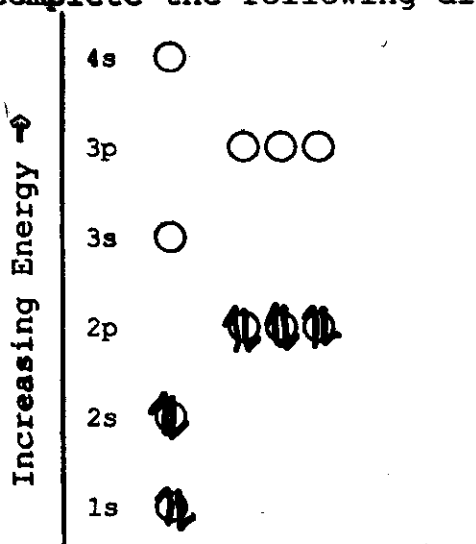
2p = energy level
 6 = # of electrons in that level

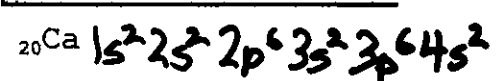
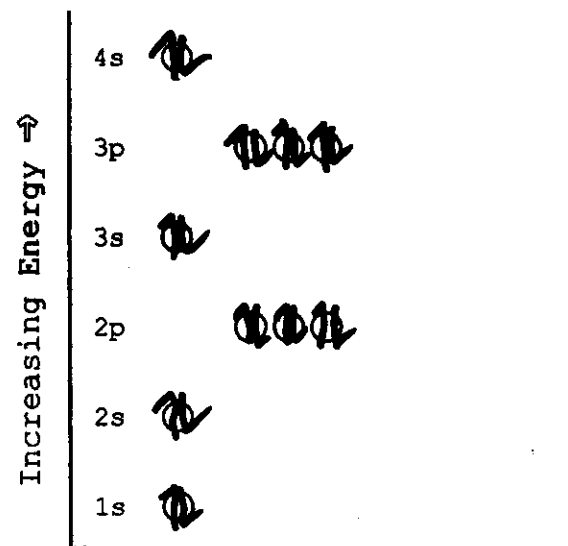
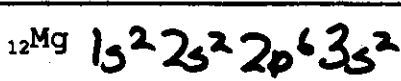
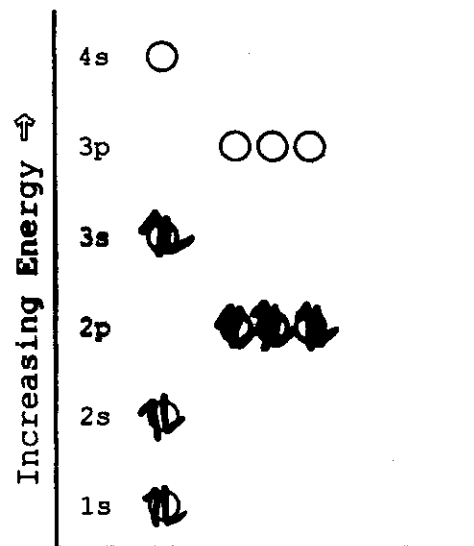
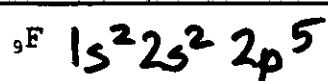
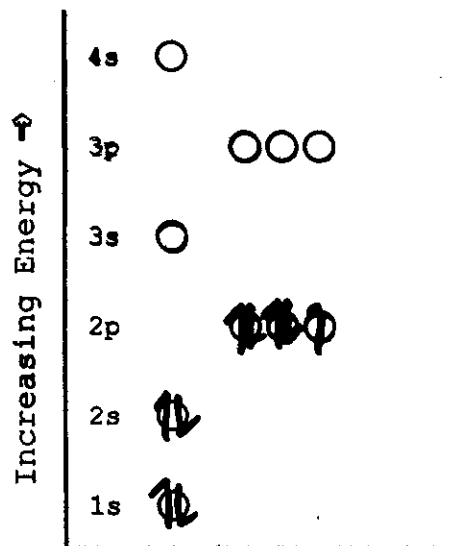
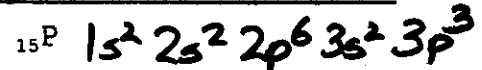
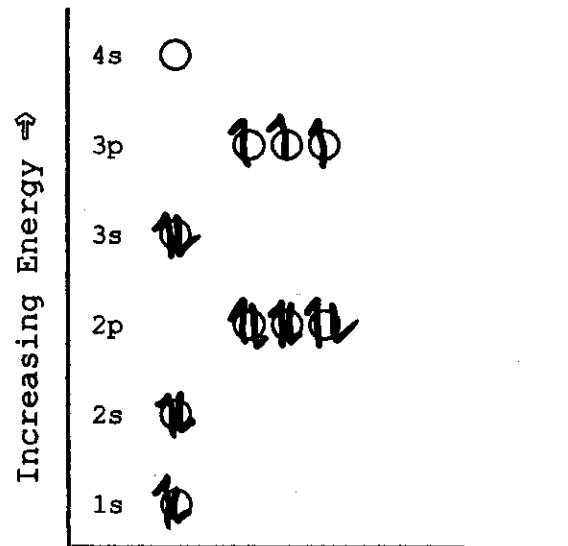
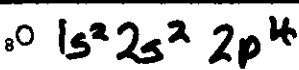
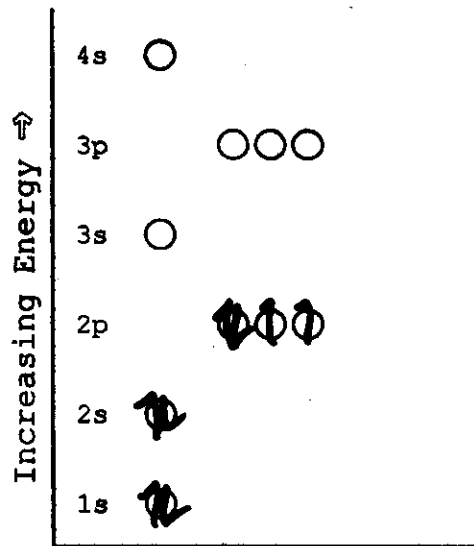
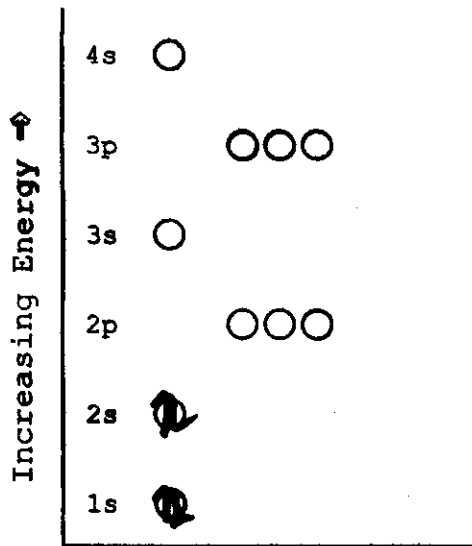
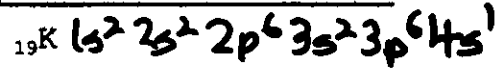
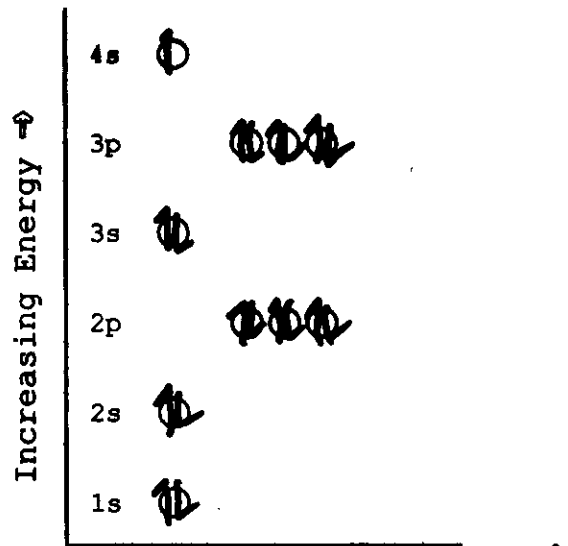
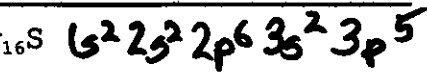
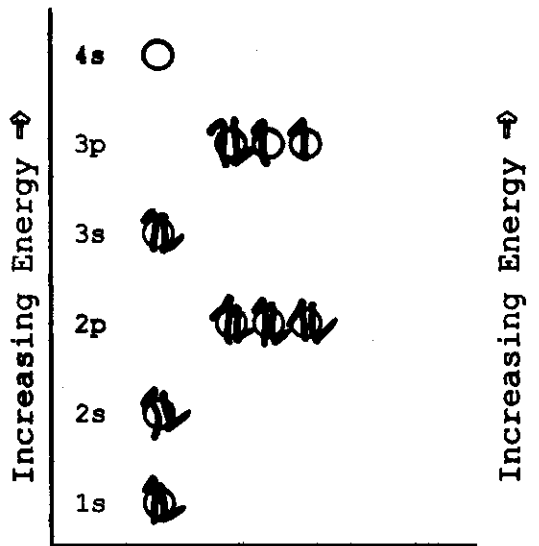
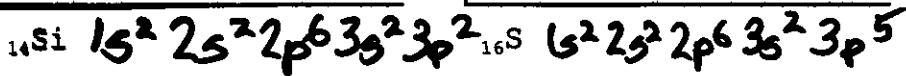
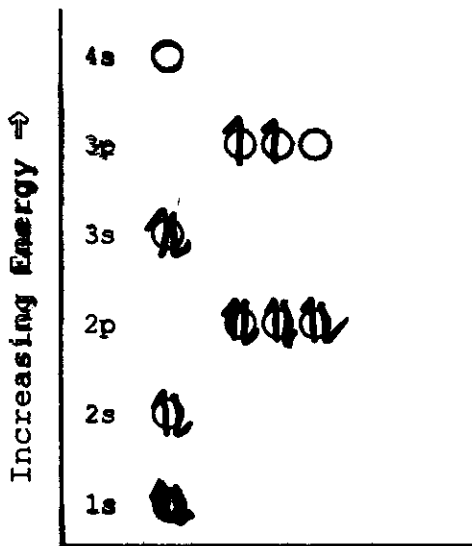
Energy Level Diagram



(1+ charge ∴ 46 e⁻)

Complete the following diagrams and fill in each electron configuration.





Main Group Elements

Metals: below and left of stairs

Non Metals: above and right of stairs

Transition Metals

Energy shells
 K → L → M → N → O → P → Q →

Li 2s ¹	Be 2s ²	B 2p ¹	C 2p ²	N 2p ³	O 2p ⁴	F 2p ⁵	Ne 2p ⁶										
Na 3s ¹	Mg 3s ²	Al 3p ¹	Si 3p ²	P 3p ³	S 3p ⁴	Cl 3p ⁵	Ar 3p ⁶										
K 4s ¹	Ca 4s ²	Sc 3d ¹	Ti 3d ²	V 3d ³	Cr 3d ⁴	Mn 3d ⁵	Fe 3d ⁶	Cu 3d ⁹	Zn 3d ¹⁰	Ga 4p ¹	Ge 4p ²	As 4p ³	Se 4p ⁴	Br 4p ⁵	Kr 4p ⁶		
Rb 5s ¹	Sr 5s ²	Y 4d ¹	Zr 4d ²	Nb 4d ³	Mo 4d ⁴	Tc 4d ⁵	Ru 4d ⁶	Rh 4d ⁷	Pd 4d ⁸	Ag 4d ⁹	Cd 4d ¹⁰	In 5p ¹	Sn 5p ²	Sb 5p ³	Te 5p ⁴	I 5p ⁵	Xe 5p ⁶
Fr 7s ¹	Ra 7s ²	Lr 6d ¹	Rf 6d ²	Db 6d ³	Sg 6d ⁴	Bh 6d ⁵	Hs 6d ⁶	Mt 6d ⁷	Hg 6d ⁹	Tl 6p ¹	Pb 6p ²	Bi 6p ³	Po 6p ⁴	At 6p ⁵	Rn 6p ⁶		
La 4f ¹	Ce 4f ²	Pr 4f ³	Nd 4f ⁴	Pm 4f ⁵	Sm 4f ⁶	Eu 4f ⁷	Gd 4f ⁷	Tb 4f ⁹	Dy 4f ¹⁰	Ho 4f ¹¹	Er 4f ¹²	Tm 4f ¹³	Yb 4f ¹⁴	No 5f ¹⁴			

* For e⁻ config stated end only

s-block

d-block

Rare Earth Metals

p-block

f-block

-  = Diatomic Gases
H₂ N₂ O₂ F₂ Cl₂
-  = Monatomic Gases
He Ne Ar Kr Xe Rn
-  = Liquids

Noble Gases (Inert Gases)

- ← Boron Group
- ← Carbon Group
- ← Nitrogen Group
- ← Oxygen Group
- ← Halogens

Name: _____

SCH 3U Electron Configuration and Periodic Table Quiz

1. For each of the following, either show the end of the electron configuration or show the element that corresponds to the end of the electron configuration:

Element Symbol	Electron Configuration
${}_{15}\text{P}$	3p^3
${}_{75}\text{Re}$	5d^5
${}_{71}\text{Lu}$	5d^1
${}_{47}\text{Ag}$	4d^9
${}_{101}\text{Md}$	5f^{13}
${}_{71}\text{Lu}$	5d^1
${}_{84}\text{Po}$	6p^4
${}_{89}\text{Ac}$	5f^1

2. Write the complete electron configuration for Roentgenium, ${}_{111}\text{Rg}$

1s^2

$2\text{s}^2 2\text{p}^6$

$3\text{s}^2 3\text{p}^6$

$4\text{s}^2 3\text{d}^{10} 4\text{p}^6$

$5\text{s}^2 4\text{d}^{10} 5\text{p}^6$

$6\text{s}^2 4\text{f}^{14} 5\text{d}^{10} 6\text{p}^6$

$7\text{s}^2 5\text{f}^{14} 6\text{d}^9$