Q#	Questions
1	Write the electron configuration for each atom. Na, Pb, Sr, U, N, Ag, Ti, Ce, Cl, Hg
2	If each orbital can hold a maximum of two electrons, how many electrons can each of the following sets hold? a) 2s b) 5p c) 4f d) 3d e) 4d
3	What is the shape of an s orbital?
4	How many s orbitals can there be in an energy level?
5	How many electrons can occupy an s orbital?
6	What is the shape of a p orbital?
7	How many p orbitals can there be in an energy level?
8	Which is the lowest energy level that can have a s orbital?
9	Which is the lowest energy level that can have a p orbital?
10	Is it possible for two electrons in the same atom to have exactly the same set of quantum numbers? Which rule tells you yes or no?
11	How many d orbitals can there be in an energy level?
12	How many d electrons can there be in an energy level?
13	Which is the lowest energy level having d orbitals?
14	How many f electrons can there be in an energy level?
15	Which is the lowest energy level having f orbitals?
16	How many f orbitals can there be in an energy level?
17	How many unpaired electrons are in each of the following atoms? a) K b) C c) P d) Ag e) Xe
18	Why do the fourth and fifth rows of elements contain 18 elements, rather than 8 as do the second and third series?
19	Which atoms are represented by the following electron configurations? a) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2\ 4d^{10}\ 5p^2$ b) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^4$ c) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^5$ d) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6$ e) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2\ 4d^{10}\ 5p^6\ 6s^2\ 4f^{14} 5d^{10} 6p^6\ 7s^1$ f) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2 4\ d^{10}\ 5p^6\ 6s^2\ 4f^{14} 5d^{10} 6p^6\ 7s^2\ 5f^{14}\ 6d^8$ g) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2\ 4d^{10}\ 5p^6\ 6s^2\ 4f^{10}$ h) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^{10}\ 4p^6\ 5s^2\ 4d^{10}\ 5p^6\ 6s^2\ 4f^{14} 5d^{10}\ 6p^4$ i) $1s^2\ 2s^2 2p^6\ 3s^2 3p^6\ 4s^2\ 3d^5$
20	What is wrong with the following configurations? a) $1s^2 2s^2 2p^6 3s^2 3p^0$ b) $1s^2 2s^2 2p^5 3s^2$ c) $1s^2 2s^2 3s^2 3p^6$

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20	What is wrong with the following configurations? d) $1s^2 2s^2 2p^6 3s^2 3p^0$ e) $1s^2 2s^2 2p^5 3s^2$ f) $1s^2 2s^2 3s^2 3p^6$