Structure of Atom

1. What information does the electronic configuration of an atom provide? (AS1)

2. Rainbow is an example for continuous spectrum – explain. (AS1)

3. What is absorption spectrum? (AS1)

4. What is an orbital? How is it different from Bohr's orbit?(AS1)

5. Explain the significance of three Quantum numbers in predicting the positions of an electron in an atom.(AS1)

6. What is nl x method? How is it useful? (AS1)

7. What is emission spectrum?

8. Which electronic shell is a higher energy level K or L? (AS2)

9. Answer the following questions.

a. How many maximum number of electrons can be accommodated in a principal energy level?
b. How many maximum number of electrons can be accommodated in a sub shell?
c. How many maximum number of electrons can be accommodated in an orbital?
d. How many sub shells are present in a principal energy level?
e. How many spin orientations are possible for an electron in an orbital? (AS1)

10. In an atom the number electrons in M-shell is equal to the number of electrons in the K and L Shell. Answer the following questions. (AS4)

a. Which is the outer most shell?
b. How many electrons are there in its outermost shell?
c. What is the atomic number of element?
d. Write the electronic configuration of the element.

11. How many elliptical orbits are there in third Bohr's orbit? (AS1)

12. Which rule is violated in the electronic configuration 1s0 2s2 2p4 ?

13. Write the four quantum numbers for the differentiating electron of sodium (Na) atom? (AS1)

14. Collect the information regarding wave lengths and corresponding frequencies of three primar colours red, blue and green. (AS4)

15. The wave length of a radio wave is 1.0m. Find its frequency.(AS7)

1) An emission spectrum consists of bright spectral lines on a dark back ground. Which one of the following does not correspond to the bright spectral lines? [ ]
A) Frequency of emitted radiation B) Wave length of emitted radiation
C) Energy of emitted radiations D) Velocity of light

2) The maximum number of electrons that can be accommodated in the L – shell of an atom is
A) 2 B) 4 C) 8 D) 16 [ ]

3) If l = 1 for an atom then the number of orbitals in its sub-shell is [ ]
A) 1 B) 2 C) 3 D) 0

4) The quantum number which explains about size and energy of the orbit or shell is: [ ]
A) n B) l C) ml D) ms