HoardQ

Subject: Chemistry

Topics: •Atomic structure

Difficulty: Easy

Multiple Choice Questions

Q1) Who coined the word 'atom'?

Options:

1) Democritus

2) Thomson

3) E Rutherford

4) John Dalton

Q2) In a hydrogen atom, if the energy of an electron in the ground state is 13.6 eV, then that in the 2nd excited state is

Options:

1) 1.51 eV

2) 3.4 eV

3) 6.04 eV

4) 13.6 eV

True/False

Q1) According to Dalton's atomic theory, atoms are composed of protons, electrons, and neutrons

Q2) The number of electrons in an atom can be found by subtracting the atomic number of an element from the mass number of an element.

Match the following

Q1) Match the atomic number with their blocks

Column A	Column B
62	d
47	p
56	f
53	s

Q2) Match the following.

Column A	Column B
J.J. Thomson's atomic model	Definite circular orbits of electron
Rutherford's atomic model	Plum pudding
Bohr's atomic model	Neutron
Chadwick	Planetary model

Solutions

1) Option 1

Solution:
          Democritus suggested that if we go on dividing matter at a certain point the atom becomes indivisible or cannot be divided further.
He called these particles as atoms (Indivisible).

2) Option 1

Solution:
          The 3rd energy level is the 2nd excited state.

n=3

$E_n = 13.6/n2 = 13.6/9 = 1.5$ eV

True/False

1) False

Solution:
          All substances, according to Dalton's atomic theory, are made up of atoms, which are indivisible and indestructible building units. While an element's atoms were all the same size and mass, various elements possessed atoms of varying sizes and masses.

2) False

Solution:
          It says that the difference between mass number and atomic number should be equal to the number of protons which is not true since this value gives us the number of neutrons

Match the following

1)

Column A	Column B
62	d
47	p
56	f
53	s

2)

Column A	Column B
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Rutherford's atomic model	Neutron
Bohr's atomic model	Plum pudding
Chadwick	Definite circular orbits of electron