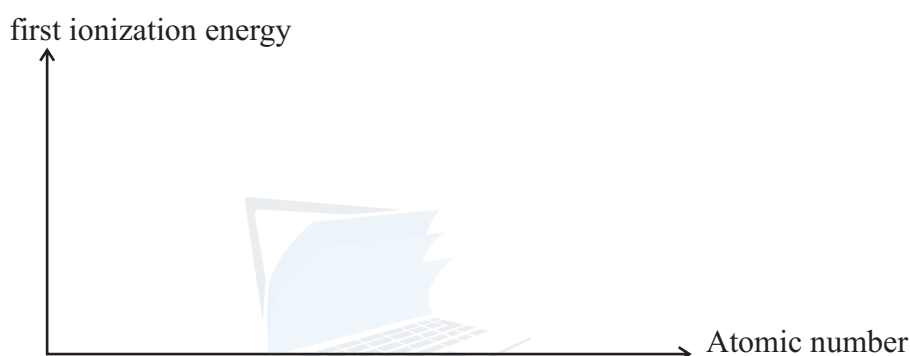
	Nalanda College - Colombo 10
	Unit Evaluation
Grade 10	Science
	Unit 3 - Structure of matter (Chemistry)

- 01 Which is the element from the given.
 (1) Water (2) Copper sulphate (3) Potassium (4) Sodium chloride
- 02 Given are the atomic numbers of some elements.
 Li - 3, O - 8, Al - 13, Cl - 17
 The formula of Aluminium Chloride is $AlCl_3$. What is the formulae of Lithium oxide.
 (1) LiO (2) Li_3O_2 (3) Li_2O (4) LiO_2
- 03 Which is the correct statement of the element which has the following notation ${}^{39}_{19}K$
 (1) Its atomic number is 19, No. of neutrons 20
 (2) Its mass number is 39, No. of protons 20
 (3) Its atomic number is 39, mass number is 19
 (4) Its atomic number is 19, No. of electrons 20
- 04 For which ions among following have the same number of electrons in Mg^{2+} equal,
 (a) Cl^- (b) O^{2-} (c) Na^+ (d) K^+
 (1) a and b (2) b and c (3) c and d (4) a and d
- 05 Which property of the elements increases from left to the right across the period?
 (1) basicity of oxides (2) Metallic property
 (3) Electro negativity (4) Reducing property
- 06 Which element among following exists as diatomic gas element.
 (1) Hydrogen (2) Ozone (3) Argon (4) Neon
- 07 There are 13 protons and 14 neutrons in an atom of the element Aluminum. In which response do you get the standard way?
 (1) ${}^{13}_{14}Al$ (2) ${}^{14}_{13}Al$ (3) ${}^{27}_{13}Al$ (4) ${}^{13}_{27}Al$
- 08 Which of the following is an amphoteric oxide.
 (1) MgO (2) Cl_2O_7 (3) SO_2 (4) Al_2O_3
- 09 What is the standard notation of protium?
 (1) 1_1H (2) 2_1H (3) 3_1H (4) 1_2H
- 10 What is the element with highest electro negativity?
 (1) Cl (2) I (3) F (4) Na

Structured Essay Questions.

- 01 The periodic table has designed according to the ascending order of the atomic number of elements.
- State the element that does not belong to group I but an univalent element.
.....
 - Write the electronic configuration of that element.
.....
 - The atomic number of element Y is 16. What is the bond type of the compound Y and potassium element.
.....
 - Write the chemical formula of Y and potassium.
.....
 - Draw sketch of the variation of first ionization energy of the element in group I in the periodic table.



- 02 A rough sketch of a portion of the periodic of the periodic table is given below.

	I							VIII
(1)	A	II	III	IV	V	VI	VII	
(2)				B			C	D
(3)	E					F		
(4)								

- What is the reason to place the elements B, C, , D in the same period?
.....
- Write two monovalent elements.
.....
- Give physical character and a chemical character that is common for element B and F.
 - Physical character →
 - Chemical character →
- Which element has the highest melting point and boiling point.
.....
- What is the method used to extract E.
.....

(vi) Given below are the characters of elements B, A and F. Write the correct element inside relevant brackets showing given character.

- (a) Used as a fungicides to control plant disease. (.....)
- (b) An allotrope of this element shows the high melting point and hardness. (.....)
- (c) Used as a rocket fuel. (.....)

Essay Questions

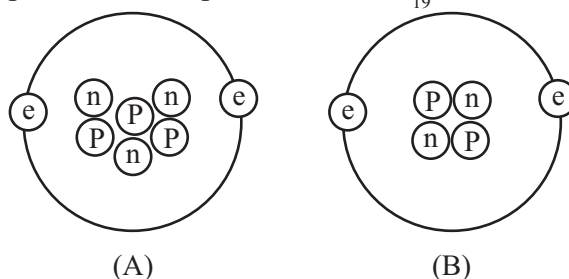
01 (A) Information about atom of some elements.

Element	Atomic number	No. of elements	No. of neutrons	No. of protons	Mass number
P	7	b			
Q	12			d	
R	13		c		27
S	15		15		f
T	a		16		31
U		18	e		36

- (i) Find and write values suitable for the places a, b, c, d, e, f.
- (ii) What is the element that belong to group V in 3rd period?
- (iii) Name 2 isotopes among above elements.
- (iv) (a) Name the elements with lowest reactivity.
(b) What is the reason for the lowest reactivity of that element?
- (B) Elements react with some other elements under various conditions.
Among above elements.
- (a) Name the element that produce oxide and releasing hydrogen gas by reacting with steam.
- (b) Sometime after adding this element into hot water with small amount of phenolphthalein. Colourless water turned into pink.
- (i) What is the element added to water?
(ii) State whether that element is a metal or non-metal?

02 Picture represents atom of an element and ion of an element. Protons are represented as P while neutrons are represented as n. Electrons in the last shell represented as e.

- (i) Name A and B (Correct standard symbols)
- (ii) Write electronic configuration of the Neutral atoms "A".
- (iii) Given is standard representation of potassium atom ${}_{19}^{39}\text{K}$



- (a) Using correct symbols represent "B" atom.
- (b) How many protons are there in potassium atom?
- (c) How many protons are there in potassium ion?
- (d) What is the valancy of potassium?

(03)