**Asst.Prof. Kamaran Basheer Hussein- Question Bank-2023-2024-Inorganic Chem. 2nd Stage**

**- Choose the best answer .**

**1- ------------** thetotal number of electrons that an atom either gains or losses in order to form achemical bond with another atom . a- oxidation number b- atomic mass c- atomic number

2- All the elements in a common family have the same number of a- valence electrons b- protons c-atoms

3- What is the general trend of ionization energy as you go from left to right across the periodic table ?

 a-increases b-decreases

4- When an atom becomes an anion , what happens to its radius ?

 a-larger b-smaller

5- When an atom becomes a cation , what happens to its radius?

a-smaller b-larger

6- What is the general trend of electronegativity as you go down the periodic table ?

a-increases b-decreases

7- Neon is an example of

a-alkalimetals b-noble gas c- halogen

8- The force of attraction between nucleus and valence electrons ------------- in a period from left to right

a-decrease b- increase

9- When electrons removed from a lithium atome (3Li) they are removed first from which orbital?

 a-1S1 b- 2S1 c- 3S1

10- How many periods are in the periodic table ? a-eight b-seven c-eighteen

11-Where are the lanthanides and actinides elements located in the periodic table .

a-at the top of the periodic table b-at the bottom of the periodic table

12- Elements in the modern version of the periodic table are arranged in order of increasing

a-atomic mass b-atomic number c-oxidation number

13-In which element shielding of the nuclear charge by core electrons experience the greatest?

 a-11Na b-19K c-3Li

14-Metalic character of elements decreases in aperiod from ---------. a-top to bottom b-left to right c-right to left

15-Electron affinity is assigned a ------------ value when energy is released during the process .

 a-negative b-positive c-neutral

- Define the following terms.

 1-Modern periodic law 2- Dobereiner triad 3- ortho and para hydrogen

4- Representative elements (normal elements)

- Complete the following reactions .



**- Choose the best answer .**

1-All the elements in a common family have the same number of

1. Atoms b- protons c- neutrons d- valence electrons

2- All the elements in the Lithium (Li) family have ------------------ valence electrons .

 a-one b-two c-three d-four

3- The main sources of Na and K are

 a-Sea water b-rock salt c- earths biosphere

4- The group (1A) elements are soft , low melting metals which crystallize with ---------------- lattice .

 a-bcc b-hcp c-cubic

5- All the alkali metals have characteristic flam coloration due to the ready excitation of the

a- Inner electrons b- outer most electron c- spectrum

6- lithium carbonate salt is used in the treatment of manic-depressive disorders diseases large amounts of lithium salt damage the

 a-kidneys b- Liver c- Central nervous system

7- All the oxides of group (1A) elements are

 a- strong bases b- weak acids c- neutral oxides

8- Sodium peroxide reacts with CO2 to give a- NaCO3 b- Na2CO3  c-Na2O2

9- Chemical compounds containing at least one bond between a carbon atom and metal are called a- alkyl halides b- dicarbides c- organometallic compounds

10- Na react with liquid ammonia (dissolution) to give blue solution containing

a-solvated electrons b-sodium oxide c- amphoteric hydroxide

**- Complete the following equations. (50M)**

