

Date: 25/01/2022

Time: 00:20 hrs

1. Two elements X and Y need to be arranged in Mendeleev's periodic table. X has 3 protons more than Y but their neutrons are equal in number. Which of the following is correct about X and Y?
 - A. X will be placed after Y
 - B. X and Y should be placed together.
 - C. X and Y are isotopes.
 - D. Y will be placed after X.

2. Identify the option that is not one of the Dobereiner's triad?
 - A. Chlorine-35, Bromine-80, Iodine-127
 - B. Potassium-39, Chlorine-35.5, Bromine-80
 - C. Calcium-40, Strontium-88, Barium-137
 - D. Lithium-6, Sodium-22, Potassium-39

3. The atomic masses of X and Z are 20 u and 40 u, respectively. If X, Y and Z form a Dobereiner's triad, what should be the atomic mass of Y?
 - A. 20 u
 - B. 40 u
 - C. 30 u
 - D. 50 u

4. Identify the set of elements that will form Dobereiner triad.
- A. Lithium, sodium, potassium
 - B. Nitrogen, phosphorus, arsenic
 - C. Helium, neon, argon
 - D. Helium, hydrogen, potassium
5. Which of the following statements is correct?
- A. Law of octaves worked quite well for heavier elements but failed for lighter elements.
 - B. Law of octaves failed for both lighter elements and heavier elements.
 - C. Law of octaves worked quite well for lighter elements but failed for heavier elements.
 - D. Law of octaves was first given by Mendeleev.
6. How many groups and periods are there in the modern periodic table?
- A. 18 Groups and 7 Periods
 - B. 7 Groups and 18 Periods
 - C. 18 Groups and 9 Periods
 - D. 18 Groups and 18 Periods

7. Which of the following statement is incorrect regarding the given elements?

		1	2		13	14	15	16	17	18
1										
2		EE				FF			AA	
3			CC				DD			BB

- A. AA is the most electronegative element
 - B. BB is a noble gas
 - C. CC is an alkali metal
 - D. DD has 5 electrons in its outermost shell
8. Metallic character _____ down the group in the periodic table.
- A. increases
 - B. decreases
 - C. increases and then decreases
 - D. decreases and then increases
9. Which of the following elements has twice as many electrons in its second shell as it has in its first shell?
- A. Carbon
 - B. Nitrogen
 - C. Oxygen
 - D. Sulphur

10. The valency of aluminium is :

- A.** 1
- B.** 2
- C.** 3
- D.** 4