



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 As elements of **Group 15** of the Periodic Table are considered in order from top to bottom, the **metallic character** of the atoms of each successive element generally

- A decreases
- B increases
- C remains the same

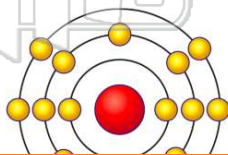
7	N
	Nitrogen
15	P
	Phosphorus
33	As
	Arsenic
51	Sb
	Antimony
83	Bi
	Bismuth

2 Which element has a total of **5 valence electrons** present in the **fifth energy level**?

- A Sb
- B Bi
- C I
- D Br

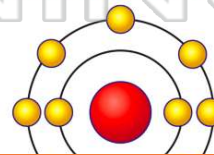
3 For which element is the **ionic radius** larger than the **atomic radius**?

- A Na
- B Mg
- C Al
- D Cl



4 Which of these elements has an atom with the **most stable outer electron configuration**?

- A Ne
- B Cl
- C Ca



## PREVIEW

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7 A c the e p  
A atomic number  
B mass number  
C the number of protons occupying the nucleus  
D the number of occupied principal energy levels

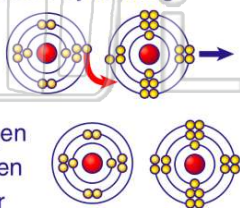
Se	Selenium
52	Te
	Tellurium
84	Po
	Polonium

- A decreases
- B increases
- C remains the same

38	Sr
	Strontium
56	Ba
	Barium
88	Ra
	Radium

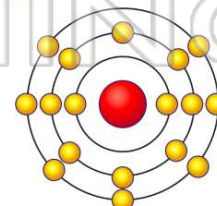
9 Which elements combine by forming an **ionic bond**?

- A sodium and potassium
- B sodium and oxygen
- C carbon and oxygen
- D carbon and sulfur



10 Which element forms an ion that is **larger** than its atom?

- A aluminum
- B chlorine
- C magnesium
- D sodium





## ANSWER KEY

As elements of **Group 15** of the Periodic Table are considered in order from top to bottom, the **metallic character** of the atoms of each successive element generally

- A decreases
- B increases
- C remains the same

7	N	Nitrogen
15	P	Phosphorus
33	As	Arsenic
51	Sb	Antimony
83	Bi	Bismuth

(b)

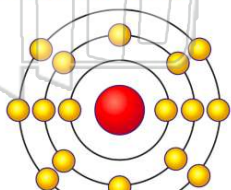
Which element has a total of **5 valence electrons** present in the **fifth energy level**?

- A Sb
- B Bi
- C I
- D Br

(a)

For which element is the **ionic radius** larger than the **atomic radius**?

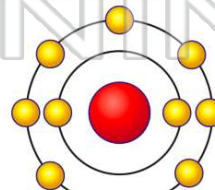
- A Na
- B Mg
- C Al
- D Cl



(d)

Which of these elements has an atom with the **most stable outer electron configuration**?

- A Ne
- B Cl
- C Ca
- D Na



(a)



## PREVIEW

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- A the mass number
- B the number of neutrons occupying the nucleus
- C the number of protons occupying the nucleus
- D the number of occupied principal energy levels

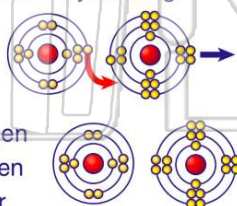
52	Te	Tellurium
84	Po	Polonium

- B increases
- C remains the same

56	Ba	Barium
88	Ra	Radium

Which elements combine by forming an **ionic bond**?

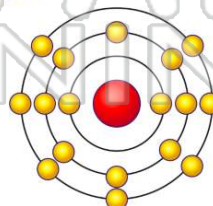
- A sodium and potassium
- B sodium and oxygen
- C carbon and oxygen
- D carbon and sulfur



(b)

Which element forms an ion that is **larger** than its atom?

- A aluminum
- B chlorine
- C magnesium
- D sodium



(b)