



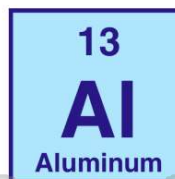
Name _____ Class _____ Date _____

1 Which **process** converts an atom from one element to another, when the **nucleus of an atom is bombarded** with high-energy particles?

- A artificial transmutation
- B natural transmutation
- C addition polymerization
- D condensation polymerization

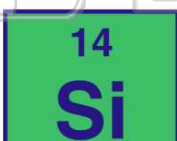
2 What is the total number of electrons in the **valence shell** of an atom of aluminum in the ground state?

- A 8
- B 2
- C 3
- D 10



3 Which of these elements has **physical and chemical properties** most similar to **silicon (Si)**?

- A germanium (Ge)
- B lead (Pb)
- C phosphorus (P)



4 Which of the following elements has the **highest electronegativity**?

- A H
- B K
- C Al
- D Ca



PREVIEW

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atomic numbers

- C different mass numbers but the same atomic number
- D different mass numbers and different atomic numbers

conductivity

- C low ionization energy and poor electrical conductivity
- D low ionization energy and good electrical conductivity

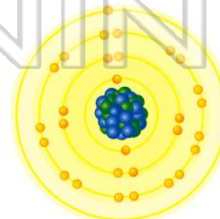
9 Which **element** is classified as a **noble gas** at STP?

- A hydrogen
- B oxygen
- C neon
- D nitrogen

	13	14	15	16	17	18	
	B	C	N	O	F	Ne	1
	Al	Si	P	S	Cl	Ar	2
12	Zn	Ga	Ge	As	Se	Br	3
	Cd	In	Sn	Sb	Te	I	4
	Hg	Tl	Pb	Bi	Po	At	5
							6

10 **Metallic bonding** occurs between atoms of

- A sulfur
- B copper
- C fluorine
- D carbon





ANSWER KEY

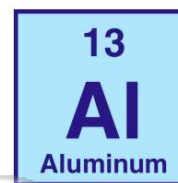
Which **process** converts an atom from one element to another, when the **nucleus of an atom is bombarded** with high-energy particles?

- A** artificial transmutation
- B** natural transmutation
- C** addition polymerization
- D** condensation polymerization

(a)

What is the total number of electrons in the **valence shell** of an atom of aluminum in the ground state?

- A** 8
- B** 2
- C** 3
- D** 10



(c)

Which of these elements has **physical and chemical properties** most similar to **silicon (Si)**?

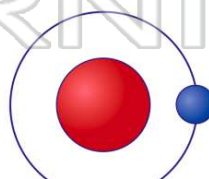
- A** germanium (Ge)
- B** lead (Pb)
- C** phosphorus (P)
- D** chlorine (Cl)



(a)

Which of the following elements has the **highest electronegativity**?

- A** H
- B** K
- C** Al
- D** Ca



(a)



PREVIEW

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- C** different mass numbers but the same atomic number
- D** different mass numbers and different atomic numbers

- C** low ionization energy and poor electrical conductivity
- D** low ionization energy and good electrical conductivity

Which **element** is classified as a **noble gas** at STP?

- A** hydrogen
- B** oxygen
- C** neon
- D** nitrogen

18	2	He	Helium	1		
13	14	15	16	17	10	
3	6	7	8	9	11	
B	C	N	O	F	Ne	
13	14	15	16	17	18	
Al	Si	P	S	Cl	Ar	
12	31	32	33	34	35	36
Zn	Ga	Ge	As	Se	Br	Kr
48	49	50	51	52	53	54
Cd	In	Sn	Sb	Te	I	Xe
80	81	82	83	84	85	86
Hg	Tl	Pb	Bi	Po	At	Rn
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