Name	Key	Date	Cla	SS
<u> </u>	2017	IODIC TABL		

Chapter

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A. Matching

Match each term in Column B with the correct description in Column A. Write the letter of the correct term on the line.

	Column A			Column B	
<u> </u>	half the distance between the nuclei of t same element when the atoms are joine		a.	electronegativity	
	negatively charged ion		b.	groups	
<u>. 13</u> 3.	the vertical columns of the periodic table	e	c.	atomic radius	
	the nonmetallic elements of Group 7A		d.	ionization energy	
5.	elements in which the highest occupied are filled	s and p sublevels	e.	periodic law	
	the tendency for the atoms of an elemented electrons when the atoms are in a comp		f.	alkali metals	
	positively charged ion		g.	halogens	
<u>)</u> 8.	the energy required to remove an electronatom in the gaseous state	on from an	h.	noble gases	
9,	the Group 1A elements	•	i.	anion	
10. When elements are arranged in order of increasing atomic number, there is a periodic repetition of their physical and chemical properties.			j.	cation	
B. Multiple Choice					
Choose the best answer and write its letter on the line.					
11. The modern periodic table is arranged in order of increasing					
		c. atomic size.			
	b. atomic number.	d. atomic radius.			
_ <i>l</i> //_ 12.	The elements in Groups 1A through 7A a	are			
		c. transition metals.			
-	b. alkaline earth metals.	d. representative eler	ne	nts.	

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Name _		Da	ate	Class
W	₋ 13.	Which of the following is true coa. Their highest occupied s and b. They belong to Group 8A. c. They are sometimes referred d. all of the above	l <i>p</i> sublevels are filled.	ses?
A	₋ 14.	What is the number of electrons of an element in Group 5A? a. 5	s in the highest occupions.	ed energy level
• ^		b. 3	d. 18	
<u> </u>	_ 15.	Among the groups of elements number of electrons in their hig a. Li, B, C, F b. Na, Mg, Al, S		evels?
	16	An element that contains an ele		
	. 100	a. Mg.	c. Fe.	
		b. O.	d. Ne.	
	_ 17.	The elements that contain elect occupied energy level are referr	ed to as	_
•		a. alkali metals.b. alkaline earth metals.	c. transition rd. inner trans	
g de	10	The electron configuration of the		
Aggenter	_ 10,	The electron configuration of the a , $3s^2$.	ie eiement chlorine end c_{\bullet} 3 s^2 3 p^5 .	us in
-		b. $3p^6$.	d. $3s^23p^7$.	
. 0	19.	The element with 8 electrons in	its $3d$ sublevel is	-
		a. O.	c. Ar.	•
Á.		b. Ne.	d. Ni.	
4	_ 20.	As you move down a group in the	ne periodic table, atom	ic size generally
		a. increases.	c. remains the	e same.
		b. decreases.	d. varies rand	omly.
	_ 21.	The largest atom from among the	ne following is	
		a. Li.	c. Rb.	
1		b. Na.	d. Fr.	
<i>KJ</i>	_ 22.	The smallest atom from among	the following is	
		a. Na.	c. Si.	
1		b. Mg.	d. Cl.	
13	_ 23.	As the number of electrons add increases, atomic size generally	ed to the same principa	al energy level
		a. increases.	c. remains the	
Λ		b. decreases.	d. varies rand	omly.
_4	_ 24.	Removing one electron from an	atom results in the for	mation of an
		a. ion with a 1+ charge.	c. ion with a 7	'+ charge.
		h ion with a L- charge	d ion with a 7	– charge

Name	Date	Class	
25	 a. Among the elements listed, which wo between the second and third ionization. b. P 	uld show the largest increase on energies? c. Ca d. Zn	
26	. Among the following, which element	has the lowest ionization energy?	
÷	a. Na	c. Cs	
	b. Cl	d. I	
	'. Among the following, which element ionization energy?		
	a. Na	c. Cs	
. ^	b. Cl	d. I	
<u>B</u> 28	Which of the following are always larger than the neutral atoms from which they are formed?		
	a. positive ions	c. cations	
	b. negative ions	d. none of the above	
_B_29	. The smallest particle from among the following is		
	a. Li.	c. F.	
	b. Li ⁺ .	d. F ⁻ .	
30	a. Na.b. Cl.	n among the following is c. Cs. d. S.	

C. Questions

Answer the following in the space provided.

31. Given the outermost energy level configurations below, complete the table by providing the period number, group number, group name (if appropriate), and symbol for each element identified.

Element	Period No.	Group No.	Group Name	Symbol
a. 2s ²	2.	2. A(1)	Alkaline Earth	Be
b. $3s^23p^3$	3	5A(15)	Deck	P
c. $3s^23p^6$	3	8 A ((x)	Noble	An
d. 4s ¹	4	(An)	Alkeli Meral)<
e. 3d ¹ 4s ²	¥	30	Thansition Getal	Sc
f. $4s^24p^5$	4	7/1 (12)	Haloses	13-

32. Arrange the following elements as described below.

Li, C, K, F, Cs

a. In order of decreasing atomic size

CS>KNIOC>F

b. In order of increasing ionization energy

c. In order of decreasing electronegativity

33. Among the following pairs of atoms, identify the larger of the two, the one with the greater first ionization energy, and the one with the lower electronegativity.

Atom	Larger	Greater Ionization Energy	Lower Electronegativity
a. Li, K	1	1	K
b. C, F	\subset	E	C
c. Mg, Ca	Cq	M.	C 9
d. O, S	ک۔	0	کـ

34. The outermost energy level configurations for the theoretical elements A—E are listed below. Use the symbols A through E to answer each of the questions that follow.

$$A = 3s^2$$

$$B = 3s^1$$

$$C = 2s^2 2p^6$$

$$D = 2s^2 2p^5$$

$$E=2s^22p^3$$

a. Which has the lowest first ionization energy?

b. Which is a noble gas?

____C

c. Which has the highest electronegativity?

d. Which has the highest second ionization energy?

e. Which is the largest atom?

<u>B</u>

D. Essay

Write a short essay for the following statement.

35. Explain why elements with high first ionization energies typically also have high electronegativity values.

Both properties we flect an atomis ability.

to attract or retrin electrons