Name			Chemistry		/
Review Take H	ome Quiz				
1. (A) 6 days	If 87.5 percent (B) 8 days	of a sample of pure (C) 12 days	<sup>131</sup> I decays in 24 da (D) 14 days	ays, what is the hal (E) 21 days	f-life of <sup>131</sup> I?
2. (A) $0.565 \times 10^9$	The proper scien (B) $5.65 \times 10^{11}$	tific notation for 56 (C) 56.5 x $10^{11}$	5,000,000,000 is – (D) 565 x 10 <sup>12</sup>	-	
3. (A) $S^{2-}$	The electron con (B) $Ca^{2+}(C) Cl^{-1}$	figuration: $1s^2 2s^2 2$ (D) K <sup>+</sup>	$2p^6 3s^2 3p^6$ correspondence (E) all of	onds to the electron of these	configuration of:
4. (A) positive charge (B) negative charge (C) mass is evenly (D) volume is may (E) positive and m	_ Experiments perf ge is evenly distribu- ge is mainly conce y distributed throug inly unoccupied legative charges are	formed to reveal the uted throughout its ntrated in its nucleu ghout its volume e concentrated in th	e structure of atoms volume IS e nucleus	led scientists to co	onclude that an atom's
5. (A) $1s^2 2s^2 2p^6 3s^2$	Which of the fo $3p^63d^4$ (B) $1s^2$ (D) $1s^2 2s^22p^6 3s^2$	llowing represents 2s <sup>2</sup> 2p <sup>6</sup> 3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>5</sup> 4s <sup>2</sup> <sup>2</sup> 3p <sup>6</sup> 3d <sup>8</sup> 4s <sup>2</sup>	the ground state ele <sup>2</sup> (C) $1s^2$ (E) $1s^2 2s^2 2p^6 3s^2$	ectron configuration 2s <sup>2</sup> 2p <sup>6</sup> 3s <sup>2</sup> 3p <sup>6</sup> 3d <sup>2</sup> 4s 3p <sup>6</sup> 3d <sup>3</sup> 4s <sup>1</sup>	$n_2$ for the Mn <sup>3+</sup> ion?
6(A) sodium	Which of the foll (B) chlorine	owing has the large (C) sulfur	est value for the sec (D) aluminum	cond ionization ene (E) magnesium	rgy?
7(A) 6	What is the maxi (B) 8	mum number of ele (C) 10	ectrons that occupy (D) 18	the n = 3 level? (E) 32	
8	Some bottles of a heir contents. A 1: y of the unknown b .792 g/mL (B) ber i=1.489 g/mL	colorless liquids we 5.0 mL sample with liquid? Izene, 0.899 g/mL (D) carbon tetrac	re being labeled wh drawn from one bo hloride, d=1.595 g.	nen the technicians ottle weighed 22.3 g /mL	accidentally mixed them up g. Which of the following is
9. (A) 7 x 10 <sup>3</sup>	The graphite in a (B) $7 \times 10^{-3}$	mechanical pencil (C) 7 x 10 <sup>-2</sup>	has a size of 0.7 m (D) 7 x 10 <sup>-4</sup>	illimeters. What is	this value in meters?
10. (A) $1, 0, 0, +\frac{1}{2}$	Which set of qua (B) 2, 1, $-1$ , $-\frac{1}{2}$	ntum numbers (n, 1 (C) 3, 3, 1, $-\frac{1}{2}$	, ml, ms) is <b>NOT</b> p (D) 4, 3, 2, + <sup>1</sup> / <sub>2</sub>	ermitted by the rule (E) 4, 1, $-1$ , $+\frac{1}{2}$	es of quantum mechanics?
11. (A) +3	What is the oxida (B) -3	ation number of pho (C) +4	osphorus in magnes (D) -5	sium phosphate?	(E) +5
12.	$^{235}_{92}$ U + $^{1}_{0}$ n $\rightarrow$	$^{141}_{55}$ Cs + 3 $^{1}_{0}$ n + X			
Neutron bombard following?	ment of uranium c	an induce the follow	ving reaction repre	sented above. Nuc	lide X is which of the
(A) $\frac{92}{35}$ Br	(B) $^{94}_{35}$ Br	(C) $\frac{91}{37}$ Rb	(D) $\frac{92}{37}$ Rb	(E) $\frac{94}{37}$ Rb	
13(A) 6	How many unpai (B) 5	ired electrons are in (C) 4	an iron atom in its (D) 2	ground state? (E) 0	
14(A) sodium	Which of the fo (B) chlorine	llowing has the larg (C) sulfur	gest electron affinit (D) aluminum	y? (E) magnesium	
15(A) Cu <sub>2</sub> O	Which of the fol (B) PbCl <sub>4</sub>	lowing contains an (C) AlP	element with a +1 (D) CuC	oxidation number?	(E) TiN

	_Which liquid is most vol	atile at 25°C?		
(A) butane, $C_4H_{10}$	(B) glycerol, $C_3H_3$	5(OH)3	(C) octane, $C_8H$	18
(L	) propanol, $C_3H_7OH$	(E) non	ane, $C_{10}H_{22}$	
17.	in which of the following	are the elements li	sted in order of in	creasing Electronegativity?
(A) Ba, Zn, C, Cl	(B) N, O, S, Cl		(C) N, P, As, Sl	b
(D	) K, Ba, Si, Ga	(E) Li, I	K, Na, Ca	
18	Sublimation is an example	e of an:		
(A) exothermic chem	ical change	(B) end	othermic physical	l change
(C) endothermic cher	nical change	(D). exc	othermic physical	change
19. $(A)$ 22 to 22 $(D)$	An electron in an atom wi	Ill emit energy (light	nt) when it moves $(E) 24$	s from energy level:
(A) 2s to 2p (B	s) is to 2s (C) 2p to	0.38 (D) 2p	to 1s (E) 3d	to 41
20.	I. NO	II. SF <sub>2</sub>	III. $PF_4^+$	
Which species have o	one or more atoms that vie	olate the octet rule	?	
(A) I and II only (B	b) III only (C) I onl	y (D) I, II	&III (E) I at	nd III only
21 V	Which of the following co	lida aan aanduat al	astriaity at room	tomporoturo?
21γ	$II A g_2 O$	III AoOH	eculcity at 100m	temperature?
1. 115	11. 11620	iii. rigoii		
(A) I only (B	b) I and II only (C) I and	l III only	(D) II and III on	ly (E) I, II, and III
22	<b>1.1</b> CC <b>11</b> · · ·	c · ·	1 1 4 6 1 6	. 1.0
22. W	hich of following is true	for ionic compoun	(P) Their solid f	letals?
(A) They are maneau $(C)$ They have free m	noving electrons	(D) The	(D) Then solid i	a crystalline structure
(c) They have nee in	(E) Their valence	electrons are attack	ned to only one at	tom.
			5	
23	Which of the following w	ould likely have th	e highest melting	point?
$(A) MnCl_7 \qquad (B$	$S) MnCl_6 \qquad (C) MnC$	$2l_4$	(D) $MnCl_3$	(E) $MnCl_2$
24	The bonding in carbon n	nonosulfide consist	s of	
(A) 1 sigma bond and	1 2 pi bonds	(B) 2 sig	gma bonds and 1	pi bond
() -0		() - c		1 1 1 1
(C) 3 sigma	bonds (D) 3 pi bonds		(E) I sigma and	1 l pi bond
(C) 3 sigma	bonds (D) 3 pi bonds		(E) I sigma and	1 l pi bond
(C) 3 sigma	bonds (D) 3 pi bonds Which ionic compound h	nas the <b>lowest</b> melt	(E) I sigma and	
(C) 3 sigma 25. (A) KCl (B	bonds (D) 3 pi bonds Which ionic compound H $(K_2O)$ (C) CaC	nas the <b>lowest</b> melt D (D) CaC	(E) I sigma and ing point? $l_2$	(E) $CaF_2$
(C) 3 sigma 25. (A) KCl (B 26.	bonds (D) 3 pi bonds Which ionic compound H $K_2O$ (C) CaC What is the oxidation num	has the <b>lowest</b> melt ) (D) CaC hber of vanadium i	(E) 1 sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ?	(E) $CaF_2$
(C) 3 sigma 25. (A) KCl (B 26. (A) -2 (B	bonds (D) 3 pi bonds Which ionic compound H b) $K_2O$ (C) CaC What is the oxidation num b) +2 (C) +1	nas the <b>lowest</b> melt (D) CaC nber of vanadium i	(E) 1 sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6	(E) $CaF_2$ (E) +4
(C) 3 sigma 25. (A) KCl (B 26. (A) -2 (B	bonds (D) 3 pi bonds Which ionic compound h b) $K_2O$ (C) CaC What is the oxidation num b) +2 (C) +1	nas the <b>lowest</b> melt (D) CaC nber of vanadium i	(E) 1 sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6	(E) $CaF_2$ (E) +4
(C) 3 sigma 25. (A) KCl (B 26. (A) -2 (B 27. 1	bonds (D) 3 pi bonds Which ionic compound h b) $K_2O$ (C) CaC What is the oxidation num b) +2 (C) +1 Many reactions are taken	nas the <b>lowest</b> melt ) (D) CaC nber of vanadium i to completion by h	(E) I sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6 eating the reaction	(E) $CaF_2$ (E) +4 on mixture in a test tube. Each of the
(C) 3 sigma 25 (A) KCl (B 26 (A) -2 (B 27 following would be a (A) bestive the test	bonds (D) 3 pi bonds Which ionic compound H (C) CaC What is the oxidation num (C) +2 Many reactions are taken safe practice <i>except</i> –	nas the <b>lowest</b> melt (D) CaC nber of vanadium i to completion by h	(E) 1 sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6 eating the reactio	(E) $CaF_2$ (E) +4 on mixture in a test tube. Each of the
(C) 3 sigma 25. $(A) \text{ KCl}$ (B 26. $(A) \text{ -2}$ (B 27. $(A) \text{ -2}$ (B 27. $(A) \text{ -2}$ (B 27. $(A) \text{ -2}$ (C) (A) heating the test the following test test the following test test test test test test test tes	bonds (D) 3 pi bonds Which ionic compound H b) $K_2O$ (C) CaC What is the oxidation num b) +2 (C) +1 Many reactions are taken as a fe practice <i>except</i> – the gently to prevent the signs are taken when a sub-	has the <b>lowest</b> melt (D) CaC ober of vanadium in to completion by h solution from boiling	(E) 1 sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6 eating the reaction ng over red	(E) $CaF_2$ (E) +4 on mixture in a test tube. Each of the
(C) 3 sigma 25. (A) KCl (B) 26. (A) $-2$ (B) 27. 16 following would be a (A) heating the test th (B) pointing the test th (C) placing a stopper	bonds (D) 3 pi bonds Which ionic compound H (C) CaC What is the oxidation num (1) + 2 (C) +1 Many reactions are taken afe practice <i>except</i> – lbe gently to prevent the s ube away from others so in a test tube to prevent	has the <b>lowest</b> melt (D) CaC ber of vanadium is to completion by h solution from boiling that no one is injurt	<ul> <li>(E) I sigma and</li> <li>ing point?</li> <li>l<sub>2</sub></li> <li>n V(CrO<sub>4</sub>)<sub>2</sub>?</li> <li>(D) +6</li> <li>eating the reaction</li> <li>ng over</li> <li>ed</li> </ul>	(E) CaF <sub>2</sub> (E) +4 on mixture in a test tube. Each of the
(C) 3 sigma 25. $(A) \text{ KCl}$ (B 26. $(A) -2$ (B 27. $(B) -2$ (B 27. $(B) -2$ (B 27. $(C) -2$ (B 27. $(C) -2$ (B 27. $(C) -2$ (C)	bonds (D) 3 pi bonds Which ionic compound H (C) CaC What is the oxidation num (C) +2 What is the oxidation num (C) +1 Many reactions are taken as a practice <i>except</i> – ube gently to prevent the s tube away from others so in a test tube to prevent g ube with test tube clamps	has the <b>lowest</b> melt (D) CaC ber of vanadium i to completion by h solution from boilin that no one is injur gas from escaping to avoid touching	<ul> <li>(E) I sigma and</li> <li>ing point?</li> <li>il<sub>2</sub></li> <li>n V(CrO<sub>4</sub>)<sub>2</sub>?</li> <li>(D) +6</li> <li>eating the reaction</li> <li>ng over</li> <li>red</li> <li>hot objects</li> </ul>	(E) CaF <sub>2</sub> (E) +4 on mixture in a test tube. Each of the
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(C) 3 sigma 25 (A) KCl (B 26 (A) -2 (B 27 following would be a (A) heating the test th (B) pointing the test th (C) placing a stopper (D) holding the test th Use these answers for	bonds (D) 3 pi bonds Which ionic compound H (C) CaC What is the oxidation num (C) +2 Many reactions are taken as a fe practice <i>except</i> – ube gently to prevent the so in a test tube to prevent gube with test tube clamps r questions 28-30.	has the <b>lowest</b> melt (D) CaC (D) CaC	(E) I sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6 eating the reaction ng over red hot objects	(E) CaF <sub>2</sub> (E) +4 on mixture in a test tube. Each of the
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(C) 3 sigma 25. $(A) \text{ KCl}$ (B 26. $(A) \text{ -2}$ (B 27. $(A) \text{ -2}$ (B 28. $(A) \text{ -2}$ (C)	bonds (D) 3 pi bonds Which ionic compound H (C) CaC What is the oxidation num (C) +2 What is the oxidation num (C) +1 Many reactions are taken as a practice <i>except</i> – ube gently to prevent the s ube away from others so in a test tube to prevent g ube with test tube clamps r questions 28-30. (C) CaO In which of the choices i	has the <b>lowest</b> melt (D) CaC (D) CaC (D) CaC (D) CaC (D) CaC (D) NO (D) NO (D) NO (D) NO	(E) I sigma and ing point? $l_2$ n V(CrO <sub>4</sub> ) <sub>2</sub> ? (D) +6 eating the reaction of over red hot objects (E) SO <sub>2</sub> e bonding in a no	(E) CaF <sub>2</sub> (E) +4 on mixture in a test tube. Each of the on-polar molecule?
(C) 3 sigma 25. $(A) \text{ KCl}$ (B 26. $(A) \text{ -2}$ (B 27. $(A) \text{ -2}$ (B 27. $(B) \text{ columns}$ (B) pointing the test th (B) pointing the test th (C) placing a stopper (D) holding the test th Use these answers for (A) CBr <sub>4</sub> (B) CO <sub>2</sub> 28. $(B) \text{ columns}$ 29. $(B) \text{ columns}$	bonds (D) 3 pi bonds Which ionic compound H (C) $K_2O$ (C) CaC What is the oxidation num (C) +2 (C) +1 Many reactions are taken afe practice <i>except</i> – ube gently to prevent the s tube away from others so in a test tube to prevent g ube with test tube clamps r questions 28-30. (C) CaO In which of the choices i Which of the molecules	has the <b>lowest</b> melt (D) CaC (D) CaC (D) CaC (D) CaC (D) CaC (D) NO (D) NO (D) NO (D) NO (D) NO (D) NO (D) NO	<ul> <li>(E) I sigma and ing point?</li> <li><sup>1</sup><sub>2</sub></li> <li>n V(CrO<sub>4</sub>)<sub>2</sub>?</li> <li>(D) +6</li> <li>eating the reaction of the presence of t</li></ul>	(E) CaF <sub>2</sub> (E) +4 on mixture in a test tube. Each of the