

Chemistry Answers to Review Sheets

Atom Review

- 1) B
- 2) B
- 3) C
- 4) A
- 5) A
- 6) A
- 7) C
- 8) B
- 9) C
- 10) B
- 11) Electrons jump to higher energy states by absorbing energy when electrons return to lower energy states they release light energy
- 12) $(12.00)(0.9893) + (13.00)(0.0107)$

Periodic Table

- 1) B
 - 2) D
 - 3) A
 - 4) A
 - 5) A
 - 6) D
 - 7) A
 - 8) A
 - 9) B
 - 10) D
 - 11) A
 - 12) C
 - 13) D
 - 14) A
- An iodine atom has more electron shells (nrg levels) than a F atom

Matter & Energy Review

- 1) D
- 2) B
- 3) C
- 4) B
- 5) C
- 6) C
- 7) D
- 8) $D = M/V$
 $19.320 \text{ g/cm}^3 = 75 \text{ g/ volume}$
 $V = 3.88 \text{ cm}^3$
D found in Table S for Gold
- 9) density, mass or volume

States of Matter Review

- 1) C
- 2) D
- 3) D
- 4) A
- 5) D
- 6) D
- 7) Show 5 particles as far apart as possible
- 8) As temperature increases more molecules have enough energy to escape the liquid phase and enter the gas phase

Gas Review

- 1) A
- 1) B
- 2) A
- 3) C
- 4) D
- 5) D
- 6)
- (6.2 ml) (1.4 atm) = (3.1 ml)P₂
- 8) -21 C
- 9) $\frac{75 \text{ kPa}}{295 \text{ K}} = \frac{x}{418 \text{ K}}$

Formulas & Equations

- 1) B
- 2) A
- 3) D
- 4) B
- 5) A
- 6) C
- 7) A
- 8) A
- 9) D
- 10) 6
- 11) 2, 2, 3

Math Review

- 1) D
- 2) C
- 3) C
- 4) A
- 5) B
- 6) D
- 7) A
- 8) B
- 9) B
- 10) 96 g/mol
- 11) 781 grams
- 12) (a) $\frac{36}{172} \times 100$
(b) 21 %
- 13) C₁₀H₈
- 14) 0.025 moles

Lab Review

- 1) D
- 2) Avoid spills or do not wear open toed shoes
- 3) C
- 4) C
- 5) 0.090 g/L
- 6) (a) Concentration HCl
(b) temperature
- 7) More molecules therefore more Collisions
- 8) $0.00125 = \frac{x}{5.00 \times 10^4}$
 $= 62.5 \text{ g}$
- 9) 3.61 g/l
- 10) B
- 11) B
- 12) $\frac{7.56 - 7.14}{7.14}$
- 13) B

Bonding

1. D
2. C
3. D
4. B
5. B
6. A
7. A
8. C
9. B
10. C
11. D
12. C
13. C
14. B

15. $O = C = O$

16. weak IMF's

17. Cl P Cl


Redox

1. A
2. A
3. D
4. C
5. B
6. A
7. D
8. D
9. A
10. +4
11. $Cl_2 + 2e \rightarrow 2 Cl^-$
12. V: produces nrg; E: uses nrg
V: chemical to electrical nrg;
E: electrical to chemical nrg
V: spontaneous; E: non spontaneous
V: cathode (+); anode (-);
E: cathode (-); anode (+)
13. arrow(s) go Zn to Cu across the wire

Kinetics

1. D
2. A
3. B
4. C
5. D
6. C
7. C
8. A
9. A
10. D
11. 1, 3, 2, 3
12. concentration of HCl;
surface area of Mg
strip; amount of Mg
13. endothermic -absorbs
heat energy

Equilibrium

1. A
2. C
3. B
4. A
5. A
6. D
7. 

8. solubility of CO_2
decreases w/ decrease
in pressure
9. an increase in temp
favors the endothermic
reaction producing more
 SO_2 ; reactions shifts
left increasing SO_2

Acids & Bases

1. B
2. A
3. C
4. D
5. B
6. C
7. C
8. A
9. A
10. A
11. A
12. C
13. yellow
14. $M_A(25) = 3(18.21)$
15. pH decreases because
there are more H_3O^+
16. OH^- or NO_3^-
17. decrease in # of fish
eggs that hatch; more
deformities

Solutions

1. C
2. B
3. B
4. C
5. B
6. $.2 = \frac{x}{0.25}$

7. ethanol BP is lower
than BP of solution
8. 30 g (+/- 2)
9. rates are equal

REFERENCE TABLE SCAVENGER HUNT ANSWERS

ANSWER	TABLE (S) USED
1. Pentane	P & Q
2. $85/36 \text{ Kr} \rightarrow 0/-1 \text{ e} + 85/37 \text{ Rb}$	N, O and PT
3. CrO_4^{2-} is insoluble w/ Ni / PO_4^{2-} is soluble w/ group 1 (Na)	F
4. P = 101.3 kPa / 1 atm T= 273 K/ 0 C	A
5. strongest (NaOH) weakest (NH_3)	L
6. acetate ion	E
7. 5g	G
8. 54 K	S
9. J/g Joules/ gram	B
10. mol	D
11. 38 kPa	H
12. $q = mHv = (20)(2260) = 45,200 \text{ J}$	T & B
13. milli	C
14. NH_3	L
15. MnO_4^{1-}	E
16. Ethanoic Acid/ acetic acid	K or R
17. 0/+1 e	O
18. $2.44 \times 10^4 \text{ yr}$	N
19. exothermic	I
20. 107.868 amu	PT
21. 48.83 KJ released	I - exo
22. strongest HCl weakest CH_3COOH	K
23. $\text{C}_n\text{H}_{2n-2}$ Carbon carbon triple bond	Q
24. 3.2	S
25. beta	N
26. 403 KJ/mol	S
27. Al lower ionization energy 578	S
28. 52	PT
29. 112 pm	S
30. -2, +4, +6	PT
31. Phenothalein 8.2 – 10	M
32. 2-8-8-1	PT
33. 85 C	H
34. decreases	PT & S
35. yes transition metal	PT
36. gain +4 to +2	PT
37. 2260 j/g	B
38. yes	J
39. 7.310 g/cm^3	S

40. difference is 0.6 therefore bond is polar, molecule is np due to symmetry

41. $25\text{g}/225\text{g} \times 100 = 11.1 \%$

42. % error = $10.1 - 10.3 / 10.3 \times 100 = 1.94\%$

43. $q = mc\Delta t$ $q = (50\text{g})(4.2)(12) = 2520 \text{ J}$