Chapter 15
Practice SAT Chemistry Subject Test 1

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PRACTICE SAT CHEMISTRY SUBJECT TEST 1

You are about to take the first of three practice SAT Chemistry Subject Tests.

After answering questions 1–23, which constitute Part A, you'll be directed to answer questions 101–116, which constitute Part B. Then you will begin again at question 24. Questions 24–69 constitute Part C.

When you're ready to score yourself, refer to the scoring instructions and answer key on this page. Full explanations regarding the correct answers to all questions start on this page.

MATERIAL IN THE FOLLOWING TABLE MAY BE USEFUL IN ANSWERING THE QUESTIONS IN THIS EXAMINATION.

PERIODIC TABLE OF THE ELEMENTS

1 H 1.0079																	2 He 4.0026
3 Li 6.941	4 Be 9.012											5 B 10.811	6 C 12.011	7 N 14.007	8 O 16.00	9 F 19.00	10 Ne 20.179
11 Na 22.99	12 Mg 24.30											13 Al 26.98	14 Si 28.09	15 P 30.974	16 S 32.06	17 Cl 35.453	18 Ar 39.948
19 K 39.10	20 Ca 40.48	21 Sc 44.96	22 Ti 47.90	23 V 50.94	24 Cr 52.00	25 Mn 54.938	26 Fe 55.85	27 Co 58.93	28 Ni 58.69	29 Cu 63.55	30 Zn 65.39	31 Ga 69.72	32 Ge 72.59	33 As 74.92	34 Se 78.96	35 Br 79.90	36 Kr 83.80
37 Rb 85.47	38 Sr 87.62	39 Y 88.91	40 Zr 91.22	41 Nb 92.91	42 Mo 95.94	43 Tc (98)	44 Ru 101.1	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.71	51 Sb 121.75	52 Te 127.60	53 I 126.91	54 Xe 131.29
55 Cs 132.91	56 Ba 137.33	57 *La 138.91	72 Hf 178.49	73 Ta 180.95	74 W 183.85	75 Re 186.21	76 Os 190.2	77 Ir 192.2	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra 226.02	89 †Ac 227.03	104 Rf (261)	105 Db (262)	106 Bh (264)	107 Sg (266)	108 Mt (268)	109 Ds (271)	110 Rg (272)	111 Hs (277)	112 § (277)						

§ Not yet named

*Lanthanide Series	58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.4	63 Eu 151.97	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.04	71 Lu 174.97
†Actinide Series	90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np 237.05	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (262)

Click here to see full page view

Note: For all questions involving solutions and/or chemical equations, assume that the system is in pure water unless otherwise stated.

Part A

Directions: Each set of lettered choices below refers to the numbered statements or questions immediately following it. Select the one lettered choice that best fits each statement or answers each question, and then fill in the corresponding oval on the answer sheet. A choice may be used once, more than once, or not at all in each set.

Questions 1–4 refer to the following.

(A) Thermometer
(B) Conductivity tester
(C) Salt bridge
(D) Buret
(E) Graduated cylinder

1. May be used in combination with a calorimeter to compare the specific heats of two two substances

2. Is used to measure the volume of a solid by water displacement

3. Useful for adding small quantities of acid into a base

4. Completes the circuit of an electrochemical cell

Questions 5–9 refer to the following.

(A) Nucleic acids
(B) Proteins
(C) Carbohydrates
(D) Lipids
(E) Electrolytes

5. Always amphoteric in nature

6. Found as both straight-chained and branched polymers

7. Deoxyribose in DNA nucleotides belongs to this family of biologically important molecules

8. Always ionic in nature

9. Tend not to be water soluble, and aggregate into droplets or molecular bilayers

Questions 10–13 refer to the following.

(A) $Ag^+ + Br^- \rightarrow AgBr$

(B) $^{14}_{6}C \rightarrow {}^{14}_{7}N + {}^{0}_{-1}e$

(C) $^{234}_{92}U \rightarrow {}^{230}_{90}Th + {}^{4}_{2}He$

(D) $+ {}^{30}_{15}P \rightarrow {}^{30}_{14}Si + {}^{0}_{1}e$

(E) $2HgO \rightarrow 2Hg + O_2$

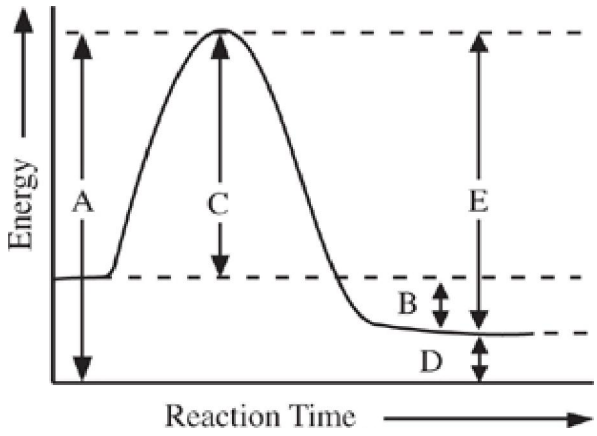
10. Represents the decomposition of a compound into its constituent elements

11. Represents alpha decay

12. Represents an oxidation-reduction reaction

13. Causes the neutron-to-proton ratio in a nucleus to be lowered

Questions 14–16 refer to the following.



14. Is the activation energy of the reverse reaction

15. Is the enthalpy change of the forward reaction

16. Represents energy of the activated complex

Questions 17–20 refer to the following.

(A) Hydrogen bonding
(B) Ionic bonding
(C) Metallic bonding
(D) Nonpolar covalent bonding
(E) Polar covalent bonding

17. Holds a sample of barium iodide, BaI_2, together

18. Allows solids to conduct electricity

19. Attracts atoms of hydrogen to each other in an H_2 molecule

20. Responsible for relatively low vapor pressure of water

Questions 21–23 refer to the following.

(A) Iron(III) chloride, $FeCl^3(s)$
(B) Iodine, $I_2(s)$
(C) Sodium hydroxide, $NaOH(s)$
(D) Sucrose, $C_{12}H_{22}O_{11}(s)$
(E) Graphite, $C(s)$

21. Gives off a purplish vapor as it sublimes

22. Can conduct electricity in the solid state

23. Its dissolution in water is highly exothermic

PLEASE GO TO THE SPECIAL SECTION LABELED CHEMISTRY AT THE LOWER RIGHT-HAND CORNER OF THE ANSWER SHEET YOU ARE WORKING ON AND ANSWER QUESTIONS 101–116 ACCORDING TO THE FOLLOWING DIRECTIONS.

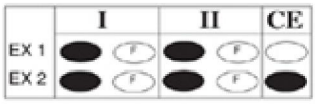
Part B

Directions: Each question below consists of two statements, I in the left-hand column and II in the right-hand column. For each question, determine whether statement I is true or false and whether statement II is true or false, and fill in the corresponding T or F ovals on your answer sheet. Fill in oval CE only if statement II is a correct explanation of statement I.

EXAMPLES:

	I		II
EX 1.	**H_2SO_4 is a strong acid**	**BECAUSE**	**H_2SO_4 contains sulfur.**
EX 2.	**An atom of oxygen is electrically neutral**	**BECAUSE**	**an oxygen atom contains an equal number of protons and electrons.**

SAMPLE ANSWERS



	I		II
101.	Carbon is a nonmetal	BECAUSE	carbon atoms can bond with each other.
102.	Two isotopes of the same element have the same mass number	BECAUSE	isotopes have the same number of protons.
103.	The density of a sample of water is doubled by doubling its mass	BECAUSE	compared to a gas, the molecules in a liquid are relatively far apart.
104.	Sodium and cesium exhibit similar chemical properties	BECAUSE	their atoms have the same number of valence electrons.
105.	An endothermic reaction can be spontaneous	BECAUSE	both enthalpy and entropy changes affect the value of a reaction's Gibbs free energy change.
106.	The 4*s* orbital fills before the 3*d* orbitals	BECAUSE	subshells fill in the order from lower to higher energy.
107.	Calcium acts as a reducing agent when it reacts with bromine	BECAUSE	mass is conserved in a chemical reaction.
108.	If an acid is added to pure water, it increases the water's pH	BECAUSE	adding an acid to water raises the hydrogen ion concentration in the water.
109.	Covalent bonds must be broken for a liquid to boil	BECAUSE	heat must be released for a liquid to change into a gas.
110.	Alpha particles can be detected using a Geiger counter	BECAUSE	all radioactive elements are highly chemically reactive.
111.	As ice absorbs heat and begins to melt, its temperature remains constant	BECAUSE	the absorbed heat is consumed by the breaking of intermolecular interactions.
112.	When a solute is added to pure water, the vapor pressure of the water will decrease	BECAUSE	all solutes dissociate into positive and negative ions.
113.	The rate of a reaction is accelerated by increasing temperature	BECAUSE	a large equilibrium constant favors the formation of product.

114.	Hydrofluoric acid, HF(*aq*), is a weaker electrolyte than hydrochloric acid, HCl(*aq*),	BECAUSE	fluorine has a lower electronegativity than chlorine.
115.	A nonpolar molecule can have polar bonds	BECAUSE	polar bonds can be symmetrically arranged in a molecule so that there are no net poles.
116.	The electrolysis of potassium iodide, KI, produces electrical energy	BECAUSE	electrons flow from the anode to the cathode.

RETURN TO THE SECTION OF YOUR ANSWER SHEET YOU STARTED FOR **CHEMISTRY** AND ANSWER QUESTIONS 24–69.

Part C

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case and then fill in the corresponding oval on the answer sheet.

24. What is the number of protons and neutrons in an atom with mass number 89 and and atomic number 39?

(A) 50 protons and 50 neutrons
(B) 50 protons and 39 neutrons
(C) 39 protons and 89 neutrons
(D) 39 protons and 50 neutrons
(E) 39 protons and 39 neutrons

$$\cdots C_4H_{10}(g) + \ldots O_2(g) \rightarrow \ldots CO_2(g) + \ldots H_2O(l)$$

25. When the above equation is balanced using the lowest whole-number terms, the coefficient of CO_2 is

(A) 2
(B) 4
(C) 8
(D) 10
(E) 13

26. Which of the following is closest in mass to a proton?

(A) Alpha particle
(B) Positron
(C) Neutron
(D) Electron
(E) Hydrogen molecule

27. What is the approximate percentage composition by mass of the element oxygen in in the compound $HClO_4$?

(A) 16%
(B) 32%
(C) 50%
(D) 64%
(E) 75%

28. If two atoms that differ in electronegativity combine by chemical reaction and share

share electrons, the bond that joins them will be

(A) metallic
(B) ionic
(C) a hydrogen bond
(D) nonpolar covalent
(E) polar covalent

29. When the temperature of a 20-gram sample of water is increased from 10°C to 30°C, 30°C, the heat transferred to the water is

(A) 600 calories
(B) 400 calories
(C) 200 calories
(D) 30 calories
(E) 20 calories

30. What is the oxidation state of chromium, Cr, in the compound potassium dichromate, dichromate, $K_2Cr_2O_7$?

(A) +1
(B) +2
(C) +3
(D) +6
(E) +12

31. An aqueous solution with pH 5 at 25°C has a hydroxide ion (OH^-) concentration of of

(A) 1 10^{-11} molar
(B) 1 10^{-9} molar
(C) 1 10^{-7} molar
(D) 1 10^{-5} molar
(E) 1 10^{-3} molar

$$2H_2O(g) \rightarrow 2H_2(g) + O_2(g)$$

32. The volume of water vapor required to produce 44.8 liters of oxygen by the above above reaction is

(A) 11.2 liters
(B) 22.4 liters
(C) 44.8 liters
(D) 89.6 liters
(E) 100.0 liters

33. When 190 grams of $MgCl_2$ are dissolved in water and the resulting solution is 500 milliliters in volume, what is the molar concentration of $MgCl_2$ in the solution?

(A) 2.0 *M*
(B) 4.0 *M*
(C) 8.0 *M*
(D) 12.0 *M*
(E) 16.0 *M*

34. When a fixed amount of gas has its Kelvin temperature doubled and its pressure doubled, the new volume of the gas is

(A) four times greater than its original volume
(B) twice its original volume
(C) unchanged
(D) one-half its original volume
(E) one-fourth its original volume

35. In 12.4 hours, a 100 gram sample of an element decays so that its mass is 25 grams. grams. What is the approximate half-life of this radioactive substance?

(A) 1.6 hours
(B) 3.1 hours
(C) 6.2 hours
(D) 24.8 hours
(E) 49.6 hours

36. In the equation $Q \rightarrow {}^{4}_{2}He + {}^{216}_{85}At$ the species represented by Q is

(A) ${}^{220}_{87}Fr$
(B) ${}^{212}_{83}Bi$
(C) ${}^{220}_{87}At$
(D) ${}^{212}_{83}Fr$
(E) ${}^{216}_{85}Bi$

37. A compound with a molecular weight of 56 amu has an empirical formula of CH_2. What is its molecular formula?

(A) C_2H_2
(B) C_2H_4
(C) C_4H_8
(D) C_4H_{10}
(E) C_6H_{12}

38. The change in heat energy for a reaction is best expressed as a change in

(A) enthalpy
(B) absolute temperature
(C) specific heat
(D) entropy
(E) kinetic energy

$$\cdots NF_3(g) + \ldots H_2O(g) \rightarrow \ldots HF(g) + \ldots NO(g) + \ldots NO_2(g)$$

39. When the equation for the reaction above is balanced, how many moles of NF_3 would would be required to react completely with 6 moles of H_2O?

(A) 0.5 mole
(B) 1 mole
(C) 2 moles
(D) 3 moles
(E) 4 moles

40. Which characteristic is associated with bases?

(A) React with metal to produce hydrogen gas
(B) Donate an unshared electron pair
(C) Always contain the hydroxide ion in their structure
(D) Taste sour
(E) Formed by the reaction of a nonmetal oxide and water

41. An element has the following properties: shiny, brittle, poor electrical conductivity, conductivity, and high melting point. This element can be best classified as a(n)

(A) alkali metal
(B) halogen
(C) metalloid
(D) transition metal
(E) noble gas

42. Which of the following forward processes produces a decrease in entropy?

I. $H_2O(g) \rightarrow H_2O(l)$
II. $Fe^{2+}(aq) + S^{2-}(aq) \rightarrow FeS(s)$
III. $2SO_3(g) \rightleftharpoons 2SO_2(g) + O_2(g)$

(A) I only
(B) III only
(C) I and II only

(D) II and III only

(E) I, II, and III

43. Which of the following will raise the boiling point of a sample of water?

(A) Heat the water

(B) Mix gasoline into the water

(C) Bring the water sample to a higher altitude

(D) Place the water sample on a magnetic stirrer

(E) Dissolve table sugar into the water

44. Elements H and J lie in the same period. If the atoms of H are smaller than the atoms atoms of J, then compared to atoms of J, atoms of H are most likely to

(A) exist in a greater number of isotopes

(B) exist in a lesser number of isotopes

(C) exist in a greater number of oxidation states

(D) have a greater positive charge in their nuclei

(E) have a lesser positive charge in their nuclei

$$\cdots Al(s) + \ldots O_2(g) \ldots Al_2O_3(s)$$

45. When the equation representing the reaction shown above is completed and balanced balanced and all coefficients are reduced to lowest whole-number terms, the coefficient of $O_2(g)$ is

(A) 1

(B) 2

(C) 3

(D) 4

(E) 6

46. Which of the following solids has a brilliant blue color?

(A) $Ca(OH)_2$

(B) KCl

(C) NaBr

(D) Fe_2O_3

(E) $CuSO_4$

47. Twenty-five percent of element X exists as ^{210}X and 75 percent of it exists as ^{214}X. What is the atomic weight of element X in amu?

(A) 85

(B) 211

(C) 212
(D) 213
(E) 214

48. A 600-milliliter container holds 2 moles of $O_2(g)$, 3 moles of $H_2(g)$, and 1 mole of He He(g). Total pressure within the container is 760 torr. What is the partial pressure of pressure of O_2?

(A) 127 torr
(B) 253 torr
(C) 380 torr
(D) 507 torr
(E) 760 torr

$$Fe(OH)_3(s) \rightleftharpoons Fe^{3+}(aq) + 3OH^-(aq)$$

49. The ionic solid $Fe(OH)_3$ is added to water and dissociates into its component ions, as ions, as shown above. The solubility product expression for the saturated solution is solution is

(A) $K_{sp} = [Fe^{3+}]\,[OH^-]$
(B) $K_{sp} = [Fe^{3+}]\,[3OH^-]$
(C) $K_{sp} = [Fe^{3+}]\,[3OH^-]^3$
(D) $K_{sp} = [Fe^{3+}]\,[OH^-]^3$
(E) $K_{sp} = \dfrac{[Fe^{3+}]\,[OH^-]^3}{[Fe(OH)_3]}$

50. Which of the following electron configurations represents an atom of magnesium in in an excited state?

(A) $1s^2 2s^2 2p^6$
(B) $1s^2 2s^2 2p^6 3s^2$
(C) $1s^2 2s^2 2p^5 3s^2 3p^2$
(D) $1s^2 2s^2 2p^6 3s^1 3p^1$
(E) $1s^2 2s^2 2p^6 3s^1 3p^2$

51. All of the following when added to water will produce an electrolytic solution EXCEPT

(A) $N_2(g)$
(B) $HCl(g)$
(C) $KOH(s)$
(D) $NaI(s)$
(E) $CaCl_2(s)$

$$NH_3\,(aq) + H_2CO_3\,(aq) \rightleftharpoons NH_4^+(aq) + HCO_3^-(aq)$$

52. In the reaction represented above, NH_4^+ acts as a(n)

(A) indicator
(B) hydrate
(C) acid
(D) base
(E) salt

53. Which species has the ground state electron configuration $1s^2 2s^2 2p^6 3s^2 3p^6$?

(A) Sulfide ion, S^{2-}
(B) Bromide ion, Br^-
(C) Neon atom, Ne
(D) Chromium ion, Cr^{3+}
(E) Potassium atom, K

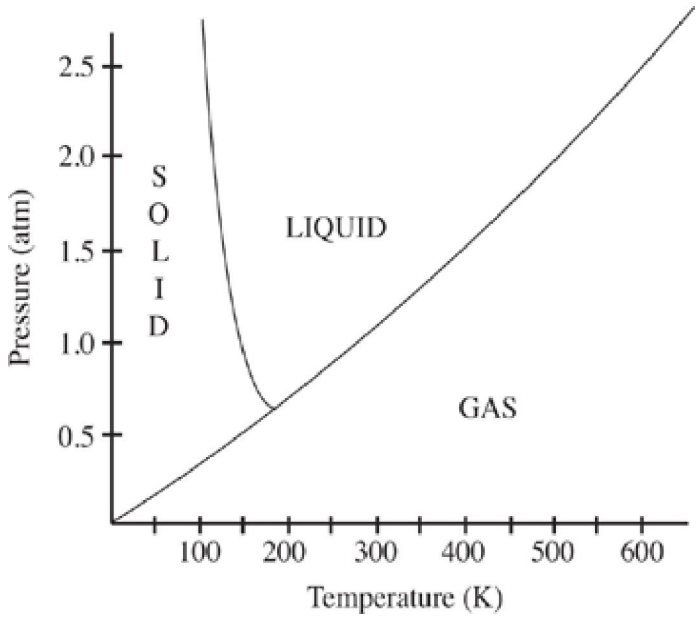
54. Which of the following species is amphoteric?

(A) Na_3PO_4
(B) HSO_4^-
(C) KOH
(D) HNO_3
(E) $C_2O_4^{2-}$

55. An ideal gas has a volume of 10 liters at 20°C and a pressure of 750 mmHg. Which Which of the following expressions is needed to determine the volume of the same same amount of gas at STP?

(A) $10 \times \frac{750}{760} \times \frac{0}{20}$ L
(B) $10 \times \frac{750}{760} \times \frac{293}{273}$ L
(C) $10 \times \frac{760}{750} \times \frac{0}{20}$ L
(D) $10 \times \frac{760}{750} \times \frac{273}{293}$ L
(E) $10 \times \frac{750}{760} \times \frac{273}{293}$ L

Questions 56–57 pertain to the phase diagram for substance Z below.



56. Substance Z is at 0.5 atm and 200 K. If the pressure on substance Z is steadily increased and its temperature is kept constant, what phase change will eventually eventually occur?

(A) Condensation
(B) Freezing
(C) Melting
(D) Sublimation
(E) Vaporization

57. The normal boiling point of substance Z is closest to

(A) 100 K
(B) 200 K
(C) 300 K
(D) 400 K
(E) 500 K

58. The shape of a PCl_3 molecule is described as

(A) bent
(B) trigonal pyramidal
(C) linear
(D) trigonal planar
(E) tetrahedral

59. What volume of 0.4 *M* $Ba(OH)_2$ (*aq*) is needed to exactly neutralize 100 milliliters of

of 0.2 *M* HBr(*aq*)?

(A) 25 mL
(B) 50 mL
(C) 100 mL
(D) 200 mL
(E) 400 mL

60. Which of the following is true regarding the aqueous dissociation of HCN, $K_a = 4.9 \times 4.9 \times 10^{-10}$ at 25°C?

I. At equilibrium, $[H^+] = [CN^-]$
II. At equilibrium, $[H^+] > [HCN]$
III. HCN*(aq)* is a strong acid.

(A) I only
(B) II only
(C) I and II only
(D) II and III only
(E) I, II, and III

61. Which of the following atoms has the largest second ionization energy?

(A) Silicon, Si
(B) Calcium, Ca
(C) Chlorine, Cl
(D) Iron, Fe
(E) Sodium, Na

Question 62 refers to the overall reaction and half-reactions with standard reduction potentials below.

$$2Fe^{2+} + Cl_2 \rightarrow 2Fe^{3+} + 2Cl^-$$

$$Fe^{3+} + e^- \rightarrow Fe^{2+}; E^o_{red} = 0.77 \text{ volts}$$

$$Cl_2 + 2e^- \rightarrow 2Cl^-; E^o_{red} = 1.36 \text{ volts}$$

62. The standard potential difference of an electro-chemical cell using the overall reaction above is

(A) 0.18 volts
(B) 0.59 volts
(C) 1.05 volts
(D) 2.13 volts
(E) 2.90 volts

63. The reaction of zinc metal, Zn, and hydrochloric acid, HCl, produces which of the the following?

I. $H_2(g)$
II. $Cl_2(g)$
III. $Zn^{2+}(aq)$

(A) II only
(B) III only
(C) I and II only
(D) I and III only
(E) I, II, and III

Questions 64–66 refer to the following reaction.

$$2H_2S(g) + 3O_2(g) \rightleftharpoons 2SO_2(g) + 2H_2O(g) + \text{heat}$$

64. For the above reaction, the equilibrium concentration of $SO_2(g)$ can be increased by by

(A) adding neon gas
(B) increasing the temperature
(C) adding a catalyst
(D) increasing the concentration of $H_2O(g)$
(E) increasing the concentration of $O_2(g)$

65. Which of the following is increased by decreasing the volume of the reaction system? system?

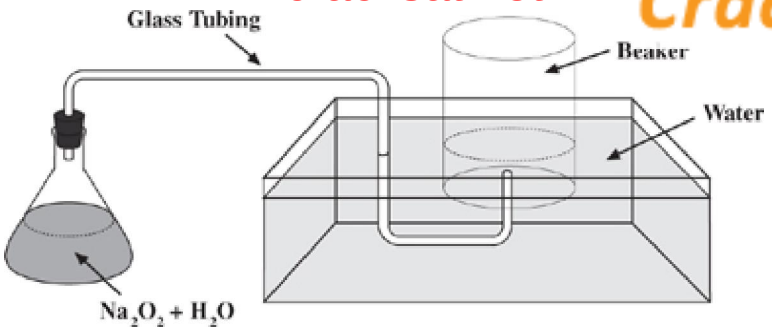
I. Rate of reaction
II. Equilibrium concentration of reactants
III. Value of K_{eq}

(A) I only
(B) III only
(C) I and II only
(D) II and III only
(E) I, II, and III

$$Fe_2O_3(s) + 3CO(g) \rightarrow 2Fe(s) + 3CO_2(g)$$

66. When 3 moles of Fe_2O_3 are allowed to completely react with 56 grams of CO according to the above equation, approximately how many moles of iron, Fe, are are produced?

(A) 0.7
(B) 1.3
(C) 2.0
(D) 2.7
(E) 6.0



$$2Na_2O_2(s) + 2H_2O(l) \rightarrow 4NaOH(aq) + O_2(g)$$

67. Sodium peroxide, Na_2O_2, and water react in the flask at 25°C according to the equation and in the diagram above. If water levels are equal inside and outside the the beaker, then the gas pressure inside the beaker is equal to the

(A) pressure of oxygen gas collected
(B) vapor pressure of water at 25°C
(C) sum of pressure of oxygen gas collected and atmospheric pressure
(D) sum of vapor pressure of water at 25°C and atmospheric pressure
(E) sum of pressure of oxygen gas collected and vapor pressure of water at 25°C

68. Which of the following molecules has the strongest carbon-to-carbon bond?

(A) C_2H_2
(B) C_2H_4
(C) C_2H_6
(D) C_3H_8
(E) C_4H_{10}

$$N_2O_4(g) \rightleftharpoons 2NO_2(g)$$

The following concentration data were gathered for the above reaction at 5 minute intervals from the start of an experiment:

Time After Start of Experiment	$[N_2O_4]$	$[NO_2]$
0 min (start)	0.00 *M*	0.50 *M*
5 min	0.10 *M*	0.33 *M*
10 min	0.20 *M*	0.20 *M*
15 min	0.25 *M*	0.15 *M*
20 min	0.28 *M*	0.13 *M*
25 min	0.28 *M*	0.13 *M*

69. If the experiment was carried out in a closed system at constant temperature, then then during which time interval (from the start of the experiment) did the reaction reaction most likely achieve equilibrium?

(A) 0 min (start) to 5 min

(B) 5 min to 10 min
(C) 10 min to 15 min
(D) 15 min to 20 min
(E) 20 min to 25 min

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section in the test.

HOW TO SCORE THE PRINCETON REVIEW PRACTICE SAT CHEMISTRY SUBJECT TEST

When you take the real exam, the proctors will collect your test booklet and bubble sheet and send your answer sheet to New Jersey, where a computer looks at the pattern of filled-in ovals on your answer sheet and gives you a score. We couldn't include even a small computer with this book, so we are providing this more primitive way of scoring your exam.

Determining Your Score

STEP 1

Using the answer key on the next page, determine how many questions you got right and how many you got wrong on the test. Remember: Questions that you do not answer don't count as either right or wrong answers.

STEP 2

List the number of right answers here.

(A) _____

STEP 3

List the number of wrong answers here. Now divide that number by 4. (Use a calculator if you're feeling particularly lazy.)

(B) _____ ÷ 4 = (C) _____

STEP 4

Subtract the number of wrong answers divided by 4 from the number of correct answers. Round this score to the nearest whole number. This is your raw score.

A) _____ – (C) _____ = _____

STEP 5

To determine your real score, take the number from Step 4 above, and look it up in the left column of the Score Conversion Table on this page; the corresponding score on the right is your score on the exam.

ANSWERS TO THE PRINCETON REVIEW PRACTICE SAT CHEMISTRY SUBJECT TEST 1

Question Number	Correct Answer	Right	Wrong
1.	A	____	____
2.	E	____	____
3.	D	____	____
4.	C	____	____
5.	B	____	____
6.	C	____	____
7.	C	____	____
8.	E	____	____
9.	D	____	____
10.	E	____	____
11.	C	____	____
12.	E	____	____
13.	B	____	____
14.	E	____	____
15.	B	____	____
16.	A	____	____
17.	B	____	____
18.	C	____	____
19.	D	____	____
20.	A	____	____
21.	B	____	____
22.	E	____	____
23.	C	____	____
24.	D	____	____
25.	C	____	____
26.	C	____	____
27.	D	____	____
28.	E	____	____
29.	B	____	____
30.	D	____	____
31.	B	____	____
32.	D	____	____
33.	B	____	____
34.	C	____	____
35.	C	____	____
36.	A	____	____
37.	C	____	____
38.	A	____	____
39.	E	____	____
40.	B	____	____
41.	C	____	____
42.	C	____	____
43.	E	____	____
44.	D	____	____
45.	C	____	____

Question Number	Correct Answer	Right	Wrong
46.	E	____	____
47.	D	____	____
48.	B	____	____
49.	D	____	____
50.	D	____	____
51.	A	____	____
52.	C	____	____
53.	A	____	____
54.	B	____	____
55.	E	____	____
56.	A	____	____
57.	C	____	____
58.	B	____	____
59.	A	____	____
60.	A	____	____
61.	E	____	____
62.	B	____	____
63.	D	____	____
64.	E	____	____
65.	A	____	____
66.	B	____	____
67.	E	____	____
68.	A	____	____
69.	D	____	____

101.	T, T
102.	F, T
103.	F, F
104.	T, T, CE
105.	T, T, CE
106.	T, T, CE
107.	T, T
108.	F, T
109.	F, F
110.	T, F
111.	T, T, CE
112.	T, F
113.	T, T
114.	T, F
115.	T, T, CE
116.	F, T

THE PRINCETON REVIEW PRACTICE SAT CHEMISTRY SUBJECT TEST SCORE CONVERSION TABLE

Raw Score	Scaled Score
85	800
84	800
83	800
82	800
81	800
80	800
79	800
78	790
77	780
76	780
75	780
74	780
73	780
72	770
71	770
70	750
69	750
68	740
67	740
66	740
65	730
64	730
63	710
62	710
61	710
60	700
59	700
58	690
57	690
56	680
55	680
54	680
53	670
52	670
51	660
50	650
49	650
48	630
47	630
46	630

Raw Score	Scaled Score
45	620
44	620
43	610
42	610
41	600
40	590
39	590
38	580
37	580
36	570
35	560
34	560
33	550
32	550
31	540
30	530
29	530
28	520
27	520
26	520
25	510
24	510
23	500
22	500
21	490
20	480
19	480
18	470
17	470
16	460
15	450
14	450
13	440
12	440
11	430
10	420
9	420
8	410
7	410
6	400

Raw Score	Scaled Score
5	390
4	390
3	380
2	380
1	370
0	370
–1	370
–2	360
–3	360
–4	350
–5	340
–6	340
–7	330
–8	330
–9	320
–10	310
–11	310
–12	300
–13	300
–14	290
–15	280
–16	280
–17	270
–18	270
–19	260
–20	250
–21	250