

PRACTICE SAT CHEMISTRY SUBJECT TEST 3

You are about to take the third practice SAT Chemistry Subject Test. After answering questions 1–32, which constitute Part A, you'll be directed to answer questions 101–116, which constitute Part B. Then, begin again at question 33. Questions 33–69 constitute Part C.

When you're ready to score yourself, refer to the scoring instructions and answer key on pages 323 and 324. Full explanations regarding the correct answers to all questions start on page 327.

DO NOT DETACH FROM BOOK.

PERIODIC TABLE OF THE ELEMENTS

CHEMISTRY SUBJECT TEST

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

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	*La 138.91	Hf 178.49	Ta 180.95	W 183.85	Re 186.21	Os 190.2	Ir 192.2	Pt 195.08	Au 196.97	Hg 200.59	Tl 204.38	Pb 207.2	Bi 208.98	Po (209)	At (210)	Rn (222)
87 Fr (223)	88 Ra 226.02	†Ac 227.03	Rf (261)	Db (262)	Sg (263)	Bh (262)	Hs (265)	Mt (266)	§ (269)	§ (272)	§ (272)	§ 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
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 (260)

†Actinide Series

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CHEMISTRY SUBJECT TEST 3

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 1–5 refer to the following.

- (A) Carbon
 - (B) Nitrogen
 - (C) Oxygen
 - (D) Neon
 - (E) Argon
1. Is the third most abundant gas in Earth's atmosphere
 2. At standard conditions, has an allotropic form that is a good electrical conductor
 3. Regardless of its electron configuration, it must always be paramagnetic when it's a single, neutrally charged atom
 4. The key element delivered in soil fertilizer
 5. Allotrope of this element is the primary absorber of UV solar radiation in Earth's atmosphere

Questions 6–9 refer to the following.

- (A) Chemical pH indicator
 - (B) Acid/base buffer
 - (C) Anhydrous solution
 - (D) Hypotonic solution
 - (E) Supersaturated solution
6. A conjugate acid/base pair with differing spectral absorbencies
 7. An example of a solution not in equilibrium
 8. Term used in reference to an aqueous solution's osmotic pressure
 9. Addition of water to this solution will not change $[\text{H}_3\text{O}^+]$

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CHEMISTRY SUBJECT TEST 3—*Continued*

Questions 10–14 refer to the following.

- (A) Standard voltaic potential
- (B) Entropy
- (C) Enthalpy
- (D) Reaction rate
- (E) Gibbs free energy

- 10. Increased with the addition of a catalyst
- 11. Abbreviated as "*H*"
- 12. A property that must decrease when a gas condenses into a liquid
- 13. Is always positive for a spontaneous chemical reaction
- 14. Is zero for a crystalline solid that is elementally pure at 0°K

Questions 15–19 refer to the following.

- (A) Alkali metals
- (B) Alkaline earth metals
- (C) Noble gases
- (D) Halogens
- (E) Transition metals

- 15. The most unreactive family of elements
- 16. Form negative ions in an ionic bond
- 17. Consist of atoms that have valence electrons in a *d* subshell
- 18. Exist as diatomic molecules at room temperature
- 19. Members possess the lowest first ionization energy in their respective period

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CHEMISTRY SUBJECT TEST 3—*Continued*

Questions 20–24 refer to the following.

- (A) N_2
- (B) KI
- (C) CCl_4
- (D) AgNO_3
- (E) CaCO_3

- 20. A product of a neutralization of a strong acid with a strong base
- 21. A volatile covalent liquid at 25°C and 1 atm
- 22. Releases a gas with the addition of dilute acid
- 23. Forms a white precipitate when added to a solution of NaCl
- 24. Treatment of the dry solid with a mild oxidizing agent produces a purple solid

Questions 25–28 refer to the following.

- (A) Gamma decay
- (B) Nuclear fusion
- (C) Alpha decay
- (D) Positron emission
- (E) Nuclear fission

- 25. Is the principle reaction responsible for the energy output of the sun
- 26. Is a nuclear process that results in no change in the mass number and atomic number of a nuclide
- 27. Responsible for most helium found on Earth
- 28. The nuclear process that transmutes uranium-238 into thorium-234

Questions 29–32 refer to the following.

- (A) 0.1 M MgCl_2
- (B) 0.1 M HClO_4
- (C) 0.1 M NH_4OH
- (D) 0.1 M KOH
- (E) 0.1 M LiNO_3

- 29. Has a pH of 13
- 30. The solution with the lowest freezing point temperature
- 31. The solution with the highest boiling point temperature
- 32. Indicates a red flame when ionized with a Bunsen burner

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CHEMISTRY SUBJECT TEST 3—*Continued*

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	CE
EX 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EX 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I		II
101. Transition metal compounds are often colored	BECAUSE	they frequently possess partially filled d orbitals.
102. Chemical reactions slow down with lower temperature	BECAUSE	the energy barrier for the formation of products decreases with decreasing temperature.
103. Exothermic reactions absorb heat	BECAUSE	breaking covalent bonds always requires energy.
104. The solubility of gases in liquids does not depend upon pressure	BECAUSE	the vapor pressure of a substance is independent of external pressure.
105. MgO has a high melting point	BECAUSE	highly charged ions result in strong ionic forces and high lattice energies.
106. The ground state electron configuration orbitals of elemental Cu is $[\text{Ar}] 4s^1 3d^{10}$	BECAUSE	completely half-filled and filled d bestow special electronic stabilization.
107. Isotopes of a particular element have nearly identical chemical behavior	BECAUSE	they have identical electron configurations.
108. In an electrochemical cell, the electrode that is the site of reduction is called the anode	BECAUSE	oxidation always occurs at the cathode.

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CHEMISTRY SUBJECT TEST 3—*Continued*

I

- | | | |
|------|--|---------|
| 109. | The addition of acid to a solution buffered to pH 7 slightly lowers the pH | BECAUSE |
| 110. | Saltwater boils at a higher temperature than pure water | BECAUSE |
| 111. | BF_3 has a tetrahedral geometry | BECAUSE |
| 112. | Hydrogen peroxide, H_2O_2 , is a good oxidizing agent | BECAUSE |
| 113. | Hydrogen gas (H_2) is considered a perfectly ideal gas | BECAUSE |
| 114. | Electrolysis of water requires the input of energy | BECAUSE |
| 115. | By mass, oxygen is the most abundant element in the human body | BECAUSE |
| 116. | LiOH is considered a strong base | BECAUSE |

II

- | |
|---|
| the addition of acids to any neutral solution always lowers the pH. |
| the presence of salt increases the vapor pressure of water. |
| the central B atom does not have a complete stable octet. |
| the hydrogen in H_2O_2 has a +1 oxidation number. |
| hydrogen atoms interact with each other via hydrogen bonds. |
| the products formed, H_2 and O_2 , possess more chemical potential energy than H_2O . |
| it is principally found as O_2 in the bloodstream. |
| it undergoes neutralization reactions with acids. |

RETURN TO THE SECTION OF YOUR ANSWER SHEET YOU STARTED FOR **CHEMISTRY** AND ANSWER QUESTIONS 33–69.

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CHEMISTRY SUBJECT TEST 3—*Continued*

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.

33. Choose the answer below that accurately describes the correct molecular shape for the molecule XeOF_4 .
- (A) Tetrahedral
 - (B) Trigonal pyramidal
 - (C) Trigonal bipyramidal
 - (D) Square pyramidal
 - (E) Flat
34. For the radioactive atom ^{99}Tc , what is the correct number of protons and neutrons?
- (A) 43 protons and 56 neutrons
 - (B) 43 protons and 99 neutrons
 - (C) 56 protons and 43 neutrons
 - (D) 56 protons and 99 neutrons
 - (E) Cannot be determined
35. Which one of the following acids is NOT strong?
- (A) HCl
 - (B) HBr
 - (C) HNO_3
 - (D) H_3PO_4
 - (E) H_2SO_4
36. Identify the equation used to determine the amount of heat required to melt 10 grams of ice.
- (A) $Q = mC_{\text{sp}}\Delta T$
 - (B) $Q = n\Delta H$
 - (C) $KE = \frac{1}{2}mv^2$
 - (D) $PE = mgh$
 - (E) $PV = nRT$
37. Identify the correct ground state electron configuration for Cr.
- (A) $[\text{Ar}] 3s^23d^4$
 - (B) $[\text{Ar}] 3s^23d^5$
 - (C) $[\text{Ar}] 4s^23d^5$
 - (D) $[\text{Ar}] 4s^23d^4$
 - (E) $[\text{Ar}] 4s^13d^5$
38. What is the hydroxide concentration for a solution with a pH of 10 at 25°C ?
- (A) $10^{-14} M$
 - (B) $10^{-10} M$
 - (C) $10^{-7} M$
 - (D) $10^{-4} M$
 - (E) $10^{-1} M$
39. Five hundred milliliters of solution of $0.1 M \text{NaBr}$ has how many milligrams of bromine?
- (A) 200 mg
 - (B) 400 mg
 - (C) 2,000 mg
 - (D) 4,000 mg
 - (E) 20,000 mg
40. According to the ideal gas law, what is the approximate volume that will be occupied by 0.5 mole of an ideal gas at 30°C and 3 atm pressure (gas constant $R = 0.0821 \text{ L}\cdot\text{atm}/\text{mol}\cdot\text{K}$)?
- (A) Less than 1 L
 - (B) 5 L
 - (C) 10 L
 - (D) 15 L
 - (E) More than 20 L

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CHEMISTRY SUBJECT TEST 3—*Continued*

41. Given that $\Delta G = \Delta H - T\Delta S$, how is the spontaneity of an endothermic reaction expected to change with decreasing T ?
- (A) Becomes less spontaneous
(B) Becomes more spontaneous
(C) Does not change
(D) Decreases at first but then increases
(E) Insufficient information to make a conclusion
42. Identify the element with the greatest first ionization energy.
- (A) Ce
(B) C
(C) Cl
(D) Ca
(E) Cs
43. Identify the molecule/ion with the greatest potential to act as a Lewis acid.
- (A) $^+\text{CH}_3$
(B) ^-CN
(C) NH_3
(D) BF_4^-
(E) CO_2
- $2 \text{Ca}_3(\text{PO}_4)_2 + 6 \text{SiO}_2 + 10 \text{C} \rightarrow \text{P}_4 + \dots \text{CaSiO}_3 + 10 \text{CO}$
44. Which coefficient balances the reaction given above?
- (A) 2
(B) 4
(C) 5
(D) 6
(E) 8
45. A 100-milliliter solution containing AgNO_3 was treated with excess NaCl to completely precipitate the silver as AgCl . If 5.7 g AgCl was obtained, what was the concentration of Ag^+ in the original solution?
- (A) 0.03 M
(B) 0.05 M
(C) 0.12 M
(D) 0.30 M
(E) 0.40 M
46. Identify which of the following statements is FALSE.
- (A) The vapor pressure of a liquid decreases with increasing atmospheric pressure.
(B) The value of an equilibrium constant is dependent on temperature.
(C) The rate of a spontaneous reaction cannot be determined solely by its Gibbs free energy.
(D) During a phase transition, the temperature of a substance must be constant.
(E) The addition of a catalyst to a reaction at equilibrium has no net effect on the system.
47. Which of the following compounds would be expected to have the greatest lattice binding energy?
- (A) LiNO_3
(B) LiF
(C) KI
(D) NH_4Br
(E) CsNO_3
48. The daughter nucleus formed when ^{18}F undergoes positron emission is
- (A) ^{14}N
(B) ^{16}O
(C) ^{18}O
(D) ^{19}F
(E) ^{20}Ne
49. Which of the following reactions produces a yellow precipitate?
- (A) $\text{NaOH} (aq) + \text{HCl} (aq) \rightarrow \text{NaCl} (s) + \text{H}_2\text{O}$
(B) $\text{NaOH} (aq) + \text{BaCl} (aq) \rightarrow \text{BaOH} (s) + \text{NaCl} (aq)$
(C) $\text{Pb}(\text{NO}_3)_2 (aq) + 2\text{KI} (aq) \rightarrow 2\text{KNO}_3 (aq) + \text{PbI}_2 (s)$
(D) $\text{CuO} (s) + \text{Mg} (s) \rightarrow \text{Cu} (s) + \text{MgO} (s)$
(E) $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$

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CHEMISTRY SUBJECT TEST 3—*Continued*



50. In the electrochemical cell described by the cell diagram above, what reaction occurs at the anode?

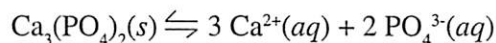
(A) $\text{Zn} \rightarrow \text{Zn}^{2+} + 2e^-$
 (B) $\text{Zn}^{2+} + 2e^- \rightarrow \text{Zn}$
 (C) $\text{Cl}_2 + 2e^- \rightarrow 2\text{Cl}^-$
 (D) $2\text{Cl}^- \rightarrow \text{Cl}_2 + 2e^-$
 (E) $\text{Zn} + \text{Cl}_2 \rightarrow \text{ZnCl}_2$

51. Given the reaction $\text{A} \rightarrow \text{B} + \text{C}$, where ΔH_{rxn} is negative, what effect would increasing the temperature (at constant pressure) have on the system at equilibrium?

(A) No change
 (B) Cannot be determined
 (C) Shift to the right
 (D) Shift to the left for $K < 1$ and to the right for $K > 1$
 (E) Shift to the left

52. An unknown acid solution was presumed to be either HCl or H_2SO_4 . Which one of the following salt solutions would produce a precipitate when added to H_2SO_4 but not when added to HCl?

(A) LiNO_3
 (B) NH_4NO_3
 (C) CsNO_3
 (D) $\text{Ba}(\text{NO}_3)_2$
 (E) AgNO_3



53. What is the equilibrium expression for the dissolution of $\text{Ca}_3(\text{PO}_4)_2$ where the above is true?

(A) $K_{\text{sp}} = [\text{Ca}^{2+}]^3[\text{PO}_4^{3-}]^2$
 (B) $K_{\text{sp}} = [\text{Ca}^{2+}]^2[\text{PO}_4^{3-}]^3$
 (C) $K_{\text{sp}} = [\text{Ca}^{2+}][\text{PO}_4^{3-}]/[\text{Ca}_3(\text{PO}_4)_2]$
 (D) $K_{\text{sp}} = [\text{Ca}^{2+}]^3[\text{PO}_4^{3-}]^2/[\text{Ca}_3(\text{PO}_4)_2]$
 (E) $K_{\text{sp}} = [\text{Ca}^{2+}]^2[\text{PO}_4^{3-}]^3/[\text{Ca}_3(\text{PO}_4)_2]$

54. Which of the following represents a conjugate acid/base pair?

(A) Na^+/Cl^-
 (B) HCl/H^+
 (C) $\text{H}_2\text{CO}_3/\text{CO}_3^{2-}$
 (D) $\text{NH}_3/\text{NH}_4^+$
 (E) K^+/OH^-

55. An unknown solution having a pH of 3.5 was titrated with 0.1 M NaOH. Analysis of the resulting titration curve showed a single equivalence point at pH 7. Therefore, which of the following could be the unknown solute in the initial solution?

(A) HF
 (B) HCl
 (C) LiOH
 (D) NH_3
 (E) H_2SO_4

56. Acid/base titration experiments could be used to determine all of the following directly EXCEPT

(A) the acid concentration of an acidic solution
 (B) the alkalinity of a basic solution
 (C) the $\text{p}K_a$ of an unknown weak acid
 (D) whether an unknown acid is monoprotic or polyprotic
 (E) the molecular weight of an unknown acid or base

57. What is the correct term for the phase change from gas directly to solid?

(A) Deposition
 (B) Sublimation
 (C) Liquefaction
 (D) Fusion
 (E) Vaporization

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CHEMISTRY SUBJECT TEST 3—*Continued*

58. What is the correct name for a straight-chained organic compound with the molecular formula C_3H_8 ?
- (A) Methane
 - (B) Ethane
 - (C) Methylethane
 - (D) Propane
 - (E) Isopropane
59. If the pH of a solution is changed from 1 to 3 with the addition of an antacid, what percentage of $[H^+]$ was neutralized?
- (A) 2%
 - (B) 10%
 - (C) 20%
 - (D) 90%
 - (E) 99%
60. Which of the following statements is the most accurate with regard to the significance of Avogadro's number, 6.02×10^{23} ?
- (A) It is the conversion factor between grams and atomic mass units.
 - (B) It is a universal physical constant just as the speed of light.
 - (C) It is the number of particles that is required to fill a 1-liter container.
 - (D) It is the inverse diameter of an H atom.
 - (E) It is the number of electrons in the universe.

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CHEMISTRY SUBJECT TEST 3—*Continued*

Questions 61–64 refer to the following data at standard conditions.

	Appearance	Reactions with dilute HCl	Reaction with dilute HNO ₃
Unknown metal #1	Dull gray solid with white oxide coating	Dissolved with bubbles of clear gas	Dissolved with bubbles of clear gas
Unknown metal #2	Solid; lustrous, smooth silver-gray surface	No reaction	Dissolved with bubbles of orange gas

61. Unknown metal #1 could be
 (A) mercury
 (B) copper
 (C) zinc
 (D) iron
 (E) silver
62. Unknown metal #2 could be
 (A) carbon
 (B) copper
 (C) zinc
 (D) sodium
 (E) silver
63. The addition of dilute HCl to unknown metal #1 produced a transparent gas. What is the likely identity of this gas?
 (A) Cl₂
 (B) H₂
 (C) O₂
 (D) CO₂
 (E) NO₂
64. The addition of dilute HNO₃ to unknown metal #2 produced an orange gas. What is the likely identity of this gas?
 (A) Cl₂
 (B) H₂
 (C) O₂
 (D) CO₂
 (E) NO₂
65. Which of the following solutions is the product of the neutralization reaction between 10 ml 0.2 M KOH and 10 ml 0.2 M HI?
 (A) 0.1 M KI₃
 (B) 0.1 M KI
 (C) 0.2 M KI
 (D) 0.4 M KI
 (E) 0.4 M HOH
66. Which of the following is true regarding an Ne atom with a mass number of 20 and an O²⁻ ion with a mass number of 16?
 (A) They contain the same number of protons.
 (B) They contain the same number of neutrons.
 (C) They contain the same number of protons plus neutrons.
 (D) They are isoelectronic.
 (E) They are isomers.
67. Which of the following statements is NOT correct regarding chemical catalysts?
 (A) They are not consumed during the chemical reaction.
 (B) They cannot make nonspontaneous reactions occur.
 (C) They do not have to be the same phase as the reactant molecules.
 (D) They shift equilibrated reactions to the product's side.
 (E) Enzymes are biological catalysts.

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CHEMISTRY SUBJECT TEST 3—*Continued*

68. Most elements are solids at 25°C and 1 atm pressure, the exception being the 11 elements that are gases and 2 that are liquids. What 2 elements are liquids?
- (A) Hg and Br
 - (B) Hg and I
 - (C) Ag and Kr
 - (D) Au and Kr
 - (E) Pt and Co
69. A student conducted an experiment and obtained three values during three repetitive trials: 1.65, 1.68, 1.71. Later, the student discovered that the true value was 2.37. In contrast to the real value, the experimental results should be characterized as
- (A) not accurate and not precise
 - (B) accurate but not precise
 - (C) not accurate but precise
 - (D) accurate and precise
 - (E) accurate, precise, but unreliable

STOP

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS TEST ONLY.
DO NOT TURN TO ANY OTHER TEST IN THIS BOOK.



Completely darken bubbles with a No. 2 pencil. If you make a mistake, be sure to erase mark completely. Erase all stray marks.

1. YOUR NAME: _____
(Print) Last First M.I.
SIGNATURE: _____ DATE: ____/____/____
HOME ADDRESS: _____
(Print) Number and Street
City State Zip Code
PHONE NO.: _____

IMPORTANT: Please fill in these boxes exactly as shown on the back cover of your test book.

2. TEST FORM

3. TEST CODE 4. REGISTRATION NUMBER

0	A	J	0	0	0	0	0	0	0	0
1	B	K	1	1	1	1	1	1	1	1
2	C	L	2	2	2	2	2	2	2	2
3	D	M	3	3	3	3	3	3	3	3
4	E	N	4	4	4	4	4	4	4	4
5	F	O	5	5	5	5	5	5	5	5
6	G	P	6	6	6	6	6	6	6	6
7	H	Q	7	7	7	7	7	7	7	7
8	I	R	8	8	8	8	8	8	8	8
9			9	9	9	9	9	9	9	9

6. DATE OF BIRTH

Month	Day	Year
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<input type="radio"/> NOV	<input type="radio"/> 9 <input type="radio"/> 9	<input type="radio"/> 9 <input type="radio"/> 9
<input type="radio"/> DEC		

7. GENDER
☐ MALE
☐ FEMALE



5. YOUR NAME

First 4 letters of last name				FIRST INIT	LAST INIT
<input type="radio"/> A	<input type="radio"/> A	<input type="radio"/> A	<input type="radio"/> A	<input type="radio"/> A	<input type="radio"/> A
<input type="radio"/> B	<input type="radio"/> B	<input type="radio"/> B	<input type="radio"/> B	<input type="radio"/> B	<input type="radio"/> B
<input type="radio"/> C	<input type="radio"/> C	<input type="radio"/> C	<input type="radio"/> C	<input type="radio"/> C	<input type="radio"/> C
<input type="radio"/> D	<input type="radio"/> D	<input type="radio"/> D	<input type="radio"/> D	<input type="radio"/> D	<input type="radio"/> D
<input type="radio"/> E	<input type="radio"/> E	<input type="radio"/> E	<input type="radio"/> E	<input type="radio"/> E	<input type="radio"/> E
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<input type="radio"/> H	<input type="radio"/> H	<input type="radio"/> H	<input type="radio"/> H	<input type="radio"/> H	<input type="radio"/> H
<input type="radio"/> I	<input type="radio"/> I	<input type="radio"/> I	<input type="radio"/> I	<input type="radio"/> I	<input type="radio"/> I
<input type="radio"/> J	<input type="radio"/> J	<input type="radio"/> J	<input type="radio"/> J	<input type="radio"/> J	<input type="radio"/> J
<input type="radio"/> K	<input type="radio"/> K	<input type="radio"/> K	<input type="radio"/> K	<input type="radio"/> K	<input type="radio"/> K
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<input type="radio"/> M	<input type="radio"/> M	<input type="radio"/> M	<input type="radio"/> M	<input type="radio"/> M	<input type="radio"/> M
<input type="radio"/> N	<input type="radio"/> N	<input type="radio"/> N	<input type="radio"/> N	<input type="radio"/> N	<input type="radio"/> N
<input type="radio"/> O	<input type="radio"/> O	<input type="radio"/> O	<input type="radio"/> O	<input type="radio"/> O	<input type="radio"/> O
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<input type="radio"/> Q	<input type="radio"/> Q	<input type="radio"/> Q	<input type="radio"/> Q	<input type="radio"/> Q	<input type="radio"/> Q
<input type="radio"/> R	<input type="radio"/> R	<input type="radio"/> R	<input type="radio"/> R	<input type="radio"/> R	<input type="radio"/> R
<input type="radio"/> S	<input type="radio"/> S	<input type="radio"/> S	<input type="radio"/> S	<input type="radio"/> S	<input type="radio"/> S
<input type="radio"/> T	<input type="radio"/> T	<input type="radio"/> T	<input type="radio"/> T	<input type="radio"/> T	<input type="radio"/> T
<input type="radio"/> U	<input type="radio"/> U	<input type="radio"/> U	<input type="radio"/> U	<input type="radio"/> U	<input type="radio"/> U
<input type="radio"/> V	<input type="radio"/> V	<input type="radio"/> V	<input type="radio"/> V	<input type="radio"/> V	<input type="radio"/> V
<input type="radio"/> W	<input type="radio"/> W	<input type="radio"/> W	<input type="radio"/> W	<input type="radio"/> W	<input type="radio"/> W
<input type="radio"/> X	<input type="radio"/> X	<input type="radio"/> X	<input type="radio"/> X	<input type="radio"/> X	<input type="radio"/> X
<input type="radio"/> Y	<input type="radio"/> Y	<input type="radio"/> Y	<input type="radio"/> Y	<input type="radio"/> Y	<input type="radio"/> Y
<input type="radio"/> Z	<input type="radio"/> Z	<input type="radio"/> Z	<input type="radio"/> Z	<input type="radio"/> Z	<input type="radio"/> Z

1. ☐ A ☐ B ☐ C ☐ D ☐ E
2. ☐ A ☐ B ☐ C ☐ D ☐ E
3. ☐ A ☐ B ☐ C ☐ D ☐ E
4. ☐ A ☐ B ☐ C ☐ D ☐ E
5. ☐ A ☐ B ☐ C ☐ D ☐ E
6. ☐ A ☐ B ☐ C ☐ D ☐ E
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14. ☐ A ☐ B ☐ C ☐ D ☐ E
15. ☐ A ☐ B ☐ C ☐ D ☐ E
16. ☐ A ☐ B ☐ C ☐ D ☐ E
17. ☐ A ☐ B ☐ C ☐ D ☐ E
18. ☐ A ☐ B ☐ C ☐ D ☐ E
19. ☐ A ☐ B ☐ C ☐ D ☐ E
20. ☐ A ☐ B ☐ C ☐ D ☐ E
21. ☐ A ☐ B ☐ C ☐ D ☐ E
22. ☐ A ☐ B ☐ C ☐ D ☐ E
23. ☐ A ☐ B ☐ C ☐ D ☐ E

24. ☐ A ☐ B ☐ C ☐ D ☐ E
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27. ☐ A ☐ B ☐ C ☐ D ☐ E
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32. ☐ A ☐ B ☐ C ☐ D ☐ E
33. ☐ A ☐ B ☐ C ☐ D ☐ E
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35. ☐ A ☐ B ☐ C ☐ D ☐ E
36. ☐ A ☐ B ☐ C ☐ D ☐ E
37. ☐ A ☐ B ☐ C ☐ D ☐ E
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41. ☐ A ☐ B ☐ C ☐ D ☐ E
42. ☐ A ☐ B ☐ C ☐ D ☐ E
43. ☐ A ☐ B ☐ C ☐ D ☐ E
44. ☐ A ☐ B ☐ C ☐ D ☐ E
45. ☐ A ☐ B ☐ C ☐ D ☐ E
46. ☐ A ☐ B ☐ C ☐ D ☐ E

47. ☐ A ☐ B ☐ C ☐ D ☐ E
48. ☐ A ☐ B ☐ C ☐ D ☐ E
49. ☐ A ☐ B ☐ C ☐ D ☐ E
50. ☐ A ☐ B ☐ C ☐ D ☐ E
51. ☐ A ☐ B ☐ C ☐ D ☐ E
52. ☐ A ☐ B ☐ C ☐ D ☐ E
53. ☐ A ☐ B ☐ C ☐ D ☐ E
54. ☐ A ☐ B ☐ C ☐ D ☐ E
55. ☐ A ☐ B ☐ C ☐ D ☐ E
56. ☐ A ☐ B ☐ C ☐ D ☐ E
57. ☐ A ☐ B ☐ C ☐ D ☐ E
58. ☐ A ☐ B ☐ C ☐ D ☐ E
59. ☐ A ☐ B ☐ C ☐ D ☐ E
60. ☐ A ☐ B ☐ C ☐ D ☐ E
61. ☐ A ☐ B ☐ C ☐ D ☐ E
62. ☐ A ☐ B ☐ C ☐ D ☐ E
63. ☐ A ☐ B ☐ C ☐ D ☐ E
64. ☐ A ☐ B ☐ C ☐ D ☐ E
65. ☐ A ☐ B ☐ C ☐ D ☐ E
66. ☐ A ☐ B ☐ C ☐ D ☐ E
67. ☐ A ☐ B ☐ C ☐ D ☐ E
68. ☐ A ☐ B ☐ C ☐ D ☐ E
69. ☐ A ☐ B ☐ C ☐ D ☐ E

PART B

	I	II	CE
101.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
102.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
103.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
104.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
105.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
106.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
107.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
108.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
109.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
110.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
111.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
112.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
113.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
114.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
115.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>
116.	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/> T <input type="radio"/> F	<input type="radio"/>

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 page 325; the corresponding score on the right is your score on the exam.

ANSWERS TO THE PRINCETON REVIEW PRACTICE SAT CHEMISTRY SUBJECT TEST 3

Question Number	Correct Answer	Right	Wrong	Question Number	Correct Answer	Right	Wrong
1.	E	_____	_____	46.	A	_____	_____
2.	A	_____	_____	47.	B	_____	_____
3.	B	_____	_____	48.	C	_____	_____
4.	B	_____	_____	49.	C	_____	_____
5.	C	_____	_____	50.	A	_____	_____
6.	A	_____	_____	51.	E	_____	_____
7.	E	_____	_____	52.	D	_____	_____
8.	D	_____	_____	53.	A	_____	_____
9.	B	_____	_____	54.	D	_____	_____
10.	D	_____	_____	55.	B	_____	_____
11.	C	_____	_____	56.	E	_____	_____
12.	B	_____	_____	57.	A	_____	_____
13.	A	_____	_____	58.	D	_____	_____
14.	B	_____	_____	59.	E	_____	_____
15.	C	_____	_____	60.	A	_____	_____
16.	D	_____	_____	61.	C	_____	_____
17.	E	_____	_____	62.	E	_____	_____
18.	D	_____	_____	63.	B	_____	_____
19.	A	_____	_____	64.	E	_____	_____
20.	B	_____	_____	65.	B	_____	_____
21.	C	_____	_____	66.	D	_____	_____
22.	E	_____	_____	67.	D	_____	_____
23.	D	_____	_____	68.	A	_____	_____
24.	B	_____	_____	69.	C	_____	_____
25.	B	_____	_____				
26.	A	_____	_____				
27.	C	_____	_____				
28.	C	_____	_____	101.	T, T, CE		
29.	D	_____	_____	102.	T, F		
30.	A	_____	_____	103.	F, T		
31.	A	_____	_____	104.	F, T		
32.	E	_____	_____	105.	T, T, CE		
33.	D	_____	_____	106.	T, T, CE		
34.	A	_____	_____	107.	T, T, CE		
35.	D	_____	_____	108.	F, F		
36.	B	_____	_____	109.	T, T, CE		
37.	E	_____	_____	110.	T, F		
38.	D	_____	_____	111.	F, T		
39.	D	_____	_____	112.	T, T		
40.	B	_____	_____	113.	F, F		
41.	E	_____	_____	114.	T, T, CE		
42.	B	_____	_____	115.	T, F		
43.	A	_____	_____	116.	T, T		
44.	D	_____	_____				
45.	E	_____	_____				

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