

PHYSICAL SETTING CHEMISTRY

Thursday, August 13, 2009 — 12:30 to 3:30 p.m., only

ANSWER BOOKLET

Student Sex: Male
 Female

Teacher

School Grade

Answer all questions in Part B-2 and Part C. Record your answers
in this booklet.

Part	Maximum Score	Student's Score
A	30	
B-1	20	
B-2	15	
C	20	
Total Written Test Score (Maximum Raw Score: 85)		<input type="text"/>
Final Score (from conversion chart)		<input type="text"/>
Raters' Initials:		
Rater 1 Rater 2		

Part B-2

51 _____

52 _____ mol

53

The graph plots Potential Energy on the vertical axis and Reaction Coordinate on the horizontal axis. A curve starts at a constant energy level, rises to a peak, and then falls to a lower constant energy level than it started at. Three horizontal dashed lines are drawn: the top one is at the peak, the middle one is at the starting energy level, and the bottom one is at the final energy level. Below the x-axis, a double-headed arrow indicates the reaction coordinate.

For Raters Only

51

52

53

For Raters
Only

54 _____

54

55 _____ g

55

56 _____ Zn(s) + _____ HCl(aq) → _____ H₂(g) + _____ ZnCl₂(aq)

56

57 _____

57

58 _____

58

**For Raters
Only**

59

59

60

60

61

61

62

62

63

ppm

63

**Total Score
for Part B-2**

Part C

**For Raters
Only**

64

_____ %

64

65 _____

65

66 _____

66

67 _____

67

**For Raters
Only**

68 _____

68

69 _____

69

70 _____

70

71 _____

71

72 _____

72

73 _____

73

74 _____

74

75 _____

75

76 _____

76

**For Raters
Only**

77

77

_____ g/cm³

78 _____ °C

78

79 _____ g

79

80 _____

80

81 _____

81

**Total Score
for Part C**

PS/CHEMISTRY

PS/CHEMISTRY