

Revised April 2013

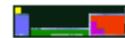
Comments on 1984 Multiple Choice

**NOTE: On the MCQ's in 1984 calculators WERE allowed
In 2013 calculators are NOT allowed on the MCQ's**

- **Hard Questions**

Of the 75 multiple choice questions on the MC AP test, there will be a *few* that are either at the periphery of your knowledge, subtly disguised or perhaps just really difficult. These *used* to be (prior to 2011) the ones that you left blank **BUT now there is NO penalty for wrong answers, so you should have ZERO BLANKS – you must guess on all questions that you cannot answer.** The following questions from the first 75 questions on the 1984 test (there were actually 85 questions on the 1984 test) are in that, 'hard question' category.

Question	Explanation/Comment	Answer
5	Hydrogen fluoride etches glass. Factoid.	A
10	$\text{Cr}_2\text{O}_7^{2-}$ ions are orange. See table in TOPIC 10 notes for other common colors of transition metal ions. Worthwhile learning as many as possible.	B
35	Organic solvents dissolve non-polar substances like halogen molecules. Water (polar) will dissolve polar substances (like dissolves like). Colors of Halogens I_2 (dark purple), Br_2 (orange), Cl_2 (green), F_2 (yellow). Tricky, TOPIC 8 plus general chemical knowledge.	D

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- **Question Analysis**

TOPIC	Question Numbers	# of questions	Comments
1 Matter & Measurement		0	
2 Atoms, Ions & Nomenclature	1, 2, 19, 30, 38	5	
3 Electronic Configuration	22*, 58*, 66*, 70	4	
4 Stoichiometry	20, 34*, 37, 44, 45, 52, 59, 67, 68, 69, 73, 79	12	
5 Aqueous Solution	65	1	
6 Gases	21, 23, 39, 50, 72, 78, 85*	7	
7 Periodicity	3, 7, 43	3	
8 Bonding	8, 9, 18, 40, 41, 51, 60, 80	8	
9 Thermochemistry	47, 56, 83	3	
10 Transition Metal Basics	10, 24, 31	4	
11 Organic Basics	-	0	
12 Equation Writing	11, 12, 13*, 32, 42, 61, 64, 81*	8	In 1984 the Equation Writing question was not part of the free response and was incorporated into the multiple choice
13 Equilibrium	27, 36, 54, 57, 74, 76	6	
14 Acids & Bases	33, 48, 49, 53, 62, 63, 71, 75	8	
15 Kinetics	25, 26, 28, 82	4	
16 Electrochemistry	4, 14, 15, 16, 17, 29, 46	7	
17 Colligative Properties	55, 84	2	
Miscellaneous (peripheral knowledge)	5, 6, 35, 77	4	5 General Knowledge 6 General Knowledge 35 General Knowledge 77 Organic Isomerism
		85	

13* could also be considered topic 5

22* could also be considered topic 2 or 8

34* could also be considered topic 5

58* could also be considered topic 10

66* could also be considered topic 10

81* could also be consider topic 10

85* could also be considered topic 4 or 12

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• Scoring Analysis

The grade boundaries below are based upon calculating a multiple-choice score by awarding one point for each correct answer, and subtracting 0.25 points for each wrong answer. Questions omitted (blanks) are ignored and do not contribute anything to your overall multiple-choice score. Prior to 2011, the advice was to leave blank any question that you were clueless about, blank; 'clueless' meaning it was not even possible to eliminate a single answer choice.

THIS WAS THE FORMAT USED IN THE 1984 EXAM, but from 2011 onwards, there is no penalty for an incorrect answer, i.e., you should ALWAYS guess and you will have ZERO blanks

Since these grade boundaries are calculated using the old format, and we currently have little data for the new format, here is how you should treat your 75 answers to give you an idea of where you currently stand in terms of an AP score.

1. Award one point for each correct answer.

2. Look at all of the questions that you got wrong, and assign them to one of two categories, EITHER

a. A question that under the old format you would have left blank, i.e. a question you were totally clueless about and could not eliminate even ONE answer. (There should be VERY few of these, and in recent years EVEN UNDER THE OLD FORMAT, many Westminster AP chemistry students have had close to ZERO 'blanks'), OR

b. A question that you could eliminate at least one answer, i.e., one that you WOULD have guessed at on the old format.

3. Do nothing with the questions in category 2a. For each question in category 2b., subtract 0.25 points from the total in #1.

In the first column of the charts below, find the range in which your total multiple-choice score falls. The %'s on that line indicate the proportion of candidates with your multiple-choice score that ultimately achieved the final AP score shown in the vertical column. The shaded boxes show the two most likely AP scores within any range. It's worth noting that your position within a range is important. For example, if you are at the top of a range you are much more likely to have ultimately achieved the higher AP scores.

The numbers in parenthesis underneath each percentage indicate the approximate multiple-choice score range that may most closely correspond to that percentage and that AP score. It is important to note that this is not a scientific mathematical analysis, rather a guesstimate! In addition, it is important to understand that there is no guarantee that a particular multiple-choice score relates to a particular AP score.

1984 Multiple-choice score related to final AP score (adjusted to be out of 75 since there were 85 questions on the original test) AND using the old format of penalizing wrong answers

Out of 75	1	2	3	4	5
42.00-75.00 (133 possible scores in the range)	0.0%	0.1% (42.00)	1.6% (42.25-42.50)	20.4% (42.75-48.75)	77.9% (49.00-75.00)
34.00-41.75 (32 possible scores in the range)	0.0%	0.3% (34.00)	25.0% (34.25-35.75)	60.4% (36.00-40.75)	14.2% (41.00-41.75)
19.00-33.75 (60 possible scores in the range)	0.9% (19.00)	14.3% (19.25-20.75)	71.4% (21.00-31.75)	13.3% (32.00-33.50)	0.2% (33.75)
11.00-18.75 (32 possible scores in the range)	19.5% (11.00-12.25)	54.0% (12.50-16.50)	26.5% (16.75-18.75)	0.0%	0.0%
0.00-10.75 (44 possible scores in the range)	72.1% (0.00-7.50)	25.4% (7.75-10.25)	2.5% (10.50-10.75)	0.0%	0.0%