

Chem 101 Test 1 –key

To calculate your grade:

#correct in multiple choice (scantron) x 5 + points for # 19-21 = total points / 150 points

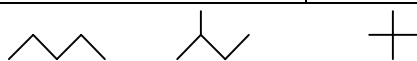
class average \pm std dev = 105 (70%) \pm 23 (15%)

Approximate letter grade: A \geq 130 out of 150; B \geq 120 pts; C \geq 80 pts Highest=145/150

Part I Multiple choice

Version A	Version B	Version C
1 a bp= 307K-273=34°C < 43°C	1d #H=(27/18)(2H/mol)(6.02E23)	1 c
2b	2b	2 b
3e	3c	3 d (10.013(.5873)+(11.009)(1-.5873) = 10.424
4b	4b C ₁₀ H ₁₈ =>MW=120+18=138	4 c mol Cd=175/112.411=1.56
5b C ₁₀ H ₁₈ =>MW=120+18=138	5b	=307/197=> Au
6c	6e	5 b
7c	7c mol Cd=175/112.411=1.56	6 c
8e	=307/197=> Au	7 e
9b	8a	8 b C ₁₀ H ₁₈ =>MW=120+18=138
10e	9d (10.013(.5873)+(11.009)(1-.5873) = 10.424	9 e
11b	10d	10 a bp= 307K-273=34°C < 43°C
12d (10.013(.5873)+(11.009)(1-.5873) = 10.424	11e	11 d #H=(27/18)(2H/mol)(6.02E23)
13d #H=(27/18)(2H/mol)(6.02E23)	12e	12 a
14c mol Cd=175/112.411=1.56	13b	13 d
=307/197=> Au	14b	14 b
15 a, e (2 answers possible)	15c	15 e
16a	16 a, e (2 answers possible)	16 a, e (2 answers possible)
17d	17e	17 b
18e	18a bp= 307K-273=34°C < 43°C	18 e

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20 assume 100g: 93.71g/12.0 = 7.81 molC; 6.29/1.0 = 6.29 molH => divide by 6.29: C_{1.24}H₁ => (x4)=C₅H₄ = Emp.F. since EW = 5(12)+1(4)=64g/mol and 128/64 = 2 : so C₁₀H₈ is the molecular formula.

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