

Grade 12 Final Chemistry Exam

Cumulative senior synthesis

All contexts are original fictional paper models. No lab, device, collection, intervention, recommendation, or real-world decision is requested. Total points: 41.

1. State one conclusion a functional-group card supports and one it excludes. [3 pts]

2. Explain why compatible IR/NMR cards can remain ambiguous. [3 pts]

3. Calculate density from 2.50 g and 1.00 mL. [3 pts]

4. Estimate density uncertainty for ± 0.05 g and ± 0.02 mL. [3 pts]

5. Distinguish a lower-final-energy label from a high-barrier label. [3 pts]

6. Explain dynamic equilibrium for equal opposing rates. [3 pts]

7. Interpret a fictional enzyme-rate plateau with one excluded claim. [3 pts]

8. Write a polymer structure-property claim with a limitation. [3 pts]

9. A surface card reports greater area. State a possible relation and missing condition. [4 pts]

10. A table rises 4.0 to 5.8 units across two X steps. Calculate total and average change. [4 pts]

11. Critique a source claiming the table proves a product should be used. Give two limits. [4 pts]

12. Write a CER synthesis using two cards with units, uncertainty/boundary, and no recommendation. [5 pts]
