



The Infinite Actuary

An Introduction To

FELLOWSHIP ACTUARIAL EXAMS

J. Eddie Smith, IV, FSA

By taking this exam, your goal is to:

- A. Become an expert in the syllabus material**
- B. Get every calculation exactly right**
- C. Memorize every line of the source material**
- D. Impress normal people**
- E. None of the above**

Your goal is to pass

**Passing starts with
understanding
the exam format**

- 10–12 questions per exam
- Average of 4 distinct sub-parts per question
- 5 hours, 15 minutes to answer all questions

****BEGINNING OF EXAMINATION****
Morning Session

1. (10 points)
- (a) (4 points) Compare and contrast policyholder tax treatment of a full policy surrender versus a partial surrender on a whole life policy in both the US and Canada.
- (b) (4 points) For a certain whole life policy you are given:

Policy Year (<i>t</i>)	20	21	22
Increase in Cash Surrender Value (CSV) in year <i>t</i>	20,000	20,000	20,000
Premium paid at beginning of year <i>t</i>	10,000	10,000	10,000
Net Cost of Pure Insurance (NCPI) in year <i>t</i>	1,000	1,000	1,000

- Assume:
- CSVs are zero for the first 19 years
 - Partial surrenders of 20,000 occur at the end of policy year 21, and 30,000 at the end of policy year 22

Calculate the tax payable for each partial policy surrender assuming a 40% tax rate and the policy is:

- (i) A US policy treated as Life Insurance, according to IRC 7702/7702A, assuming the non-taxable portion at the end of year 19 is zero.
- (ii) A US policy treated as a Modified Endowment, according to IRC 7702/7702A, assuming the non-taxable portion at the end of year 19 is zero.

	Run Time	Points
5-Hour FSA Exams	5 hours, 15 minutes	100
4-Hour ERM Exam	4 hours, 15 minutes	80
2-Hour Specialty Exams	2 hours, 15 minutes	40

$$5 \text{ hours} \times \frac{60 \text{ min}}{\text{hour}} = 300 \text{ min}$$

$$300 \text{ min} \div \frac{3 \text{ min}}{\text{point}} = 100 \text{ points}$$

Points have two *points*:

1. Show the **relative importance** of the question to the total score
2. Show you **the most time to spend** on each question and sub-part

3 minutes per point max

****BEGINNING OF EXAMINATION****
Morning Session

1. (10 points) **Max time budget = 10 × 3 = 30 minutes**

12 min (a) (4 points) Compare and contrast policyholder tax treatment of a full policy surrender versus a partial surrender on a whole life policy in both the US and Canada.

12 min (b) (4 points) For a certain whole life policy you are given:

Policy Year (t)	20	21	22
Increase in Cash Surrender Value (CSV) in year t	20,000	20,000	20,000
Premium paid at beginning of year t	10,000	10,000	10,000
Net Cost of Pure Insurance (NCPI) in year t	1,000	1,000	1,000

6 min (c) (2 points)

(i) Describe the tax advantages of marketing a Prescribed Annuity Contract in Canada.

(ii) For a specific prescribed life annuity in Canada, you are given:

Verbs Are Important

No conjugation required!

1. (10 points)

- (a) (4 points) Compare and contrast policyholder tax treatment of a full policy surrender versus a partial surrender on a whole life policy in both the US and Canada.
- (b) (4 points) For a certain whole life policy you are given:

Policy Year (t)	20	21	22
Increase in Cash Surrender Value (CSV) in year t	20,000	20,000	20,000
Premium paid at beginning of year t	10,000	10,000	10,000
Net Cost of Pure Insurance (NCPI) in year t	1,000	1,000	1,000

Assume:

- CSVs are zero for the first 19 years
- Partial surrenders of 20,000 occur at the end of policy year 21, and 30,000 at the end of policy year 22

Calculate the tax payable for each partial policy surrender assuming a 40% tax rate and the policy is:

- (i) A US policy treated as Life Insurance, according to IRC 7702/7702A, assuming the non-taxable portion at the end of year 19 is zero.
- (ii) A US policy treated as a Modified Endowment, according to IRC 7702/7702A, assuming the non-taxable portion at the end of year 19 is zero.
- (iii) An exempt Canadian policy, assuming the Adjusted Cost Base (ACB) at the end of year 19 is zero.

1. Continued

(c) (2 points)

- (i) Describe the tax advantages of marketing a Prescribed Annuity Contract in Canada.
- (ii) For a specific prescribed life annuity in Canada, you are given:
 - Annual annuity payment: 25,000
 - Adjusted purchase price: 150,000
 - Interest rate: 5%
 - Annuitant age: 61
 - Expected lifetime of annuitant: 15 years

Calculate the taxable amount of each annuity payment.

The Syllabus

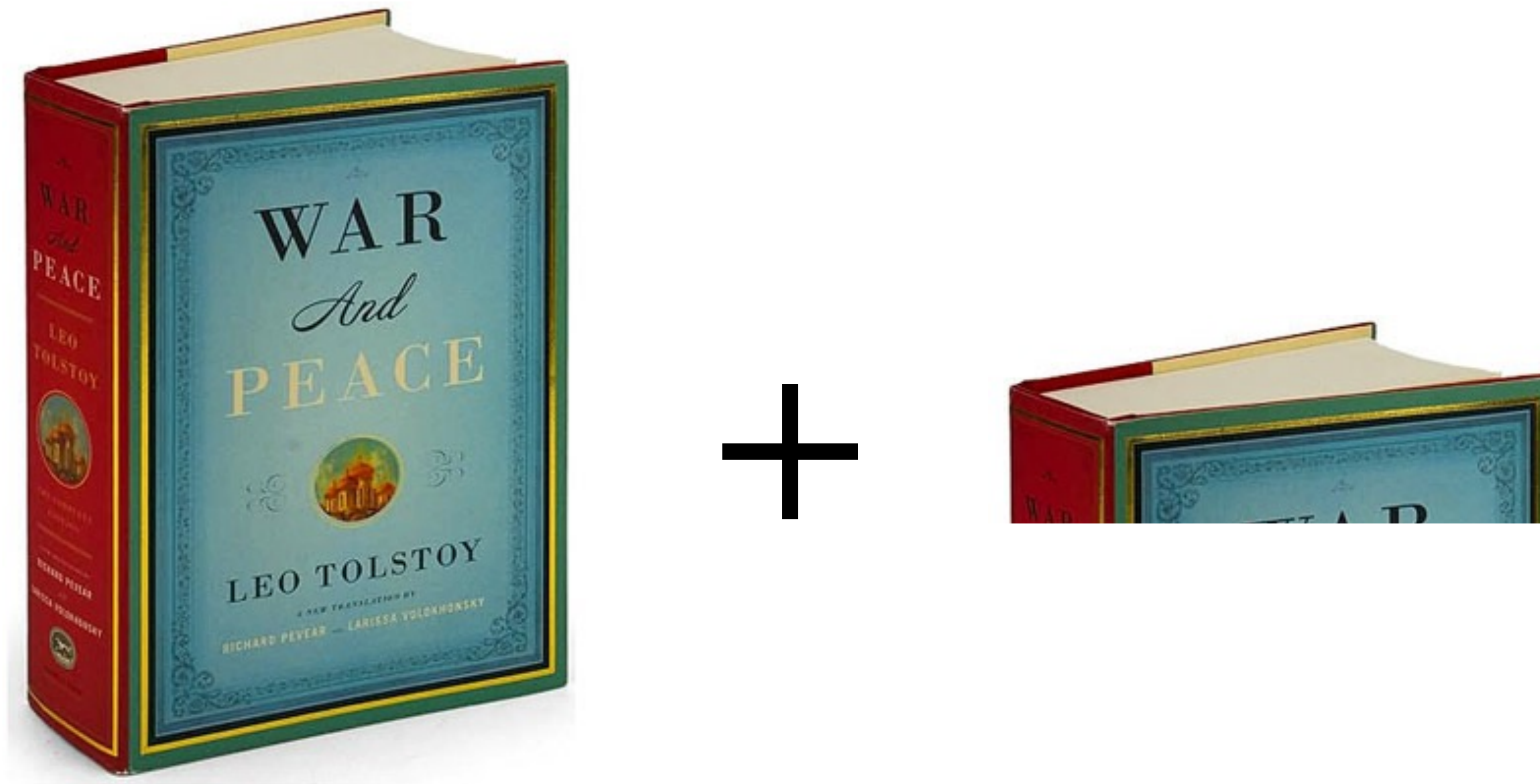
3 types of readings

- 1. Textbooks** (purchase at online bookstores like ABS)
- 2. Study notes** (purchase through SOA)
- 3. Published references** (available free online)



2000+ pages of that stuff

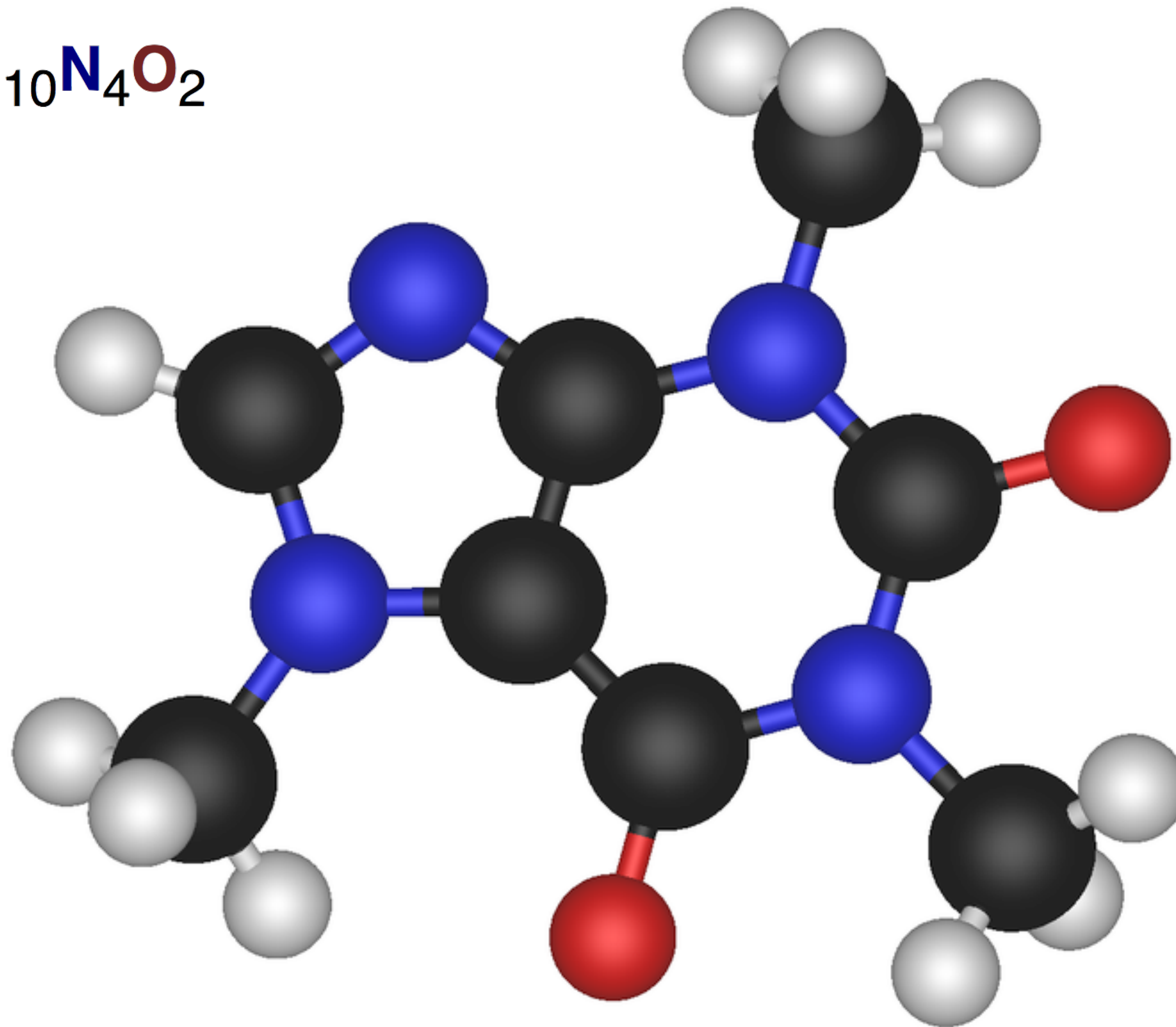
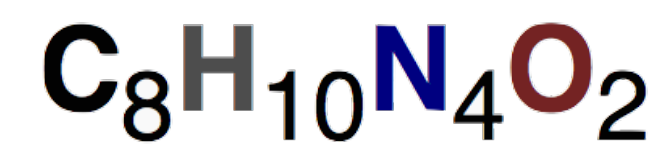
Textbooks, technical papers, tax code, industry articles,...



War and Peace
is only 1,440 pages long



You're gonna need some caffeine



Learning the elements

is your best defense against FSA exam problems



Learn as many concepts as you can
save memorization for the last 1–1.5 months

**Be sure to visit your
exam's SOA page**

Key Takeaways

- ☒ Understand the format and time constraints of the exam
- ☒ Stay on schedule while studying
- ☒ Practice time management on the exam
- ☒ Focus on concepts before memorization
- ☒ Be an active learner
- ☒ Don't be a perfectionist with the source readings