

**OAT** Optometry  
Admission Test

A SERVICE OF  
**ASCO** ASSOCIATION of  
SCHOOLS and COLLEGES  
of OPTOMETRY

# Optometry Admission Test (OAT) User's Guide

## Table of Contents

	Page
<b>Part One: Introduction and Background</b>	
History of the Optometry Admission Test (OAT) Program	2
Content of the OAT	2
Test Construction	3
Interpreting OAT Scores	3
Evaluation of the OAT Program	5
Introduction to the Tables	5
References	5
<b>Part Two: 2025 Data Tables</b>	
Table 1. Overall Descriptive Statistics	6
Table 2. Biology Score by Gender	7
Table 3. General Chemistry Score by Gender	8
Table 4. Organic Chemistry Score by Gender	9
Table 5. Reading Comprehension Score by Gender	10
Table 6. Physics Score by Gender	11
Table 7. Quantitative Reasoning Score by Gender	12
Table 8. Total Science Score by Gender	13
Table 9. Academic Average Score by Gender	14
Table 10. Biology Score by Ethnic Identification	15
Table 11. General Chemistry Score by Ethnic Identification	16
Table 12. Organic Chemistry Score by Ethnic Identification	17
Table 13. Reading Comprehension Score by Ethnic Identification	18
Table 14. Physics Score by Ethnic Identification	19
Table 15. Quantitative Reasoning Score by Ethnic Identification	20
Table 16. Total Science Score by Ethnic Identification	21
Table 17. Academic Average Score by Ethnic Identification	22
Table 18. OAT scores by Examinees of Hispanic Origin	23
Table 19. Correlations among OAT Disciplines	24
<b>Part Three: Content Specifications</b>	
Biology Content Specifications	25
General Chemistry Content Specifications	26
Organic Chemistry Content Specifications	27
Reading Content Specifications	28
Physics Content Specifications	29
Quantitative Reasoning Content Specifications	30

## **Part One: Introduction and Background**

### **History of the Optometry Admission Test Program**

In 1987, the format of the Optometry College Admission Test (OCAT) was changed to include four tests: the Survey of the Natural Sciences (biology, general chemistry, and organic chemistry); Reading Comprehension; Physics; and Quantitative Reasoning. At that time the name of the test was changed to the Optometry Admission Test (OAT™).

The Optometry Admission Test (OAT) is administered under the auspices of the Association of Schools and Colleges of Optometry (ASCO) for applicants seeking admission to schools and colleges of optometry. This testing program is designed to measure general academic ability and comprehension of scientific information. While the majority of optometry schools in the United States and Canada require applicants to participate in the OAT Program, test results are only one factor considered in evaluating an applicant's potential.

Validity studies conducted by the testing program have shown that test scores in, conjunction with collegiate records, are quite useful in predicting optometry school performance. The relative importance of these predictors in the admissions decision-making process is determined separately by each optometry school.

### **Content of the Optometry Admission Test**

The OAT is a battery consisting of four individual tests: the Survey of the Natural Sciences, Reading Comprehension Test, Physics Test, and Quantitative Reasoning Test.

The Survey of the Natural Sciences is an achievement test covering content from first-year courses in Biology, General Chemistry, and Organic Chemistry. The 90-minute test contains a total of 100 items, including 40 Biology items, 30 General Chemistry items, and 30 Organic Chemistry items. The three subtests are subdivided into several topic areas.

The Reading Comprehension Test consists of 50 items and three reading passages of approximately 1,000 to 1,500 words each. The subject matter of these passages is drawn from aspects of the basic sciences. Each passage is followed by approximately 15 to 20 items that examine the concepts and ideas developed in the passage. The time limit for the test is 60 minutes.

The Physics Test is an achievement test covering content from a two-semester physics course. It is a 50-minute test containing 40 items.

The Quantitative Reasoning Test measures an examinee's ability to reason with numbers and work intelligently with quantitative materials. This 45-minute test contains 40 items.

Additional content specifications for these four tests are presented in Part Three of this *User Guide*. Practice test material can be found at <https://oat.ada.org/>.

## **Test Construction**

Test construction for the OAT is a complex, multi-step process. Undergraduate faculty specializing in each of these disciplines develop new items for the Survey of the Natural Sciences, Physics, and Quantitative Reasoning Tests. Test Construction Teams (TCTs) specific to each discipline review new items for accuracy and relevance. Items that pass this initial review process are then pre-tested (i.e., administered to examinees, but not used in official scoring). After pretesting, the appropriate TCT may review item content and candidate performance, and, if necessary, revise the content to meet psychometric standards established for the test. Subject matter experts with backgrounds in science and English language arts develop the topics for new Reading Comprehension Test passages and work to develop the passages and accompanying items. New reading passages undergo the same review and pretesting process as other test items.

TCTs and trained psychometricians select the items to be included on each edition of the test, based on content specifications and various standards of item quality. Item quality is determined by an item's performance when administered to examinees. Two statistics in particular are of chief interest: the difficulty of the item and its discrimination index.

Item difficulty is calculated based on the percentage of individuals who answered the item correctly. The difficulty level of the item is thus inversely related to the percentage of examinees who answer the item correctly. As the percentage of examinees who answer the item correctly increases, the difficulty of the item decreases. The recommended item-difficulty level for OAT items ranges from 40 percent to 89 percent.

The discrimination index is a point-biserial correlation coefficient, where the coefficient associated with an item represents the correlation between performance on that item and the total score on that particular test. A low correlation coefficient, such as 0.01, would indicate the average test score of individuals who answered the item correctly was roughly the same as the average score of individuals who answered the item incorrectly. In this case, item performance would be unrelated to overall test performance, thus indicating that the item does not discriminate and should therefore be discarded. A higher correlation coefficient, such as .45, would indicate the item is highly effective at discriminating between high scoring and low scoring examinees. Items with higher discrimination index values are more useful in determining a rank order of examinees according to the ability being measured. OAT items that do not discriminate at acceptable levels are either revised or discarded.

## **Interpreting OAT Scores**

Each test in the OAT battery yields a raw score, which is the sum of an examinee's correct answers. The raw score is converted to a scale score which can range from 200 to 400. Using scale scores it is possible to compare the performance of examinees who attempted different editions of the examination.

In addition to the scale scores provided for each test, scale scores are also reported to represent overall performance across the science tests, and overall performance in academic areas appearing on the OAT. The Total Science score is based on the raw scores for the 100 items from the Survey of the Natural Sciences — including Biology, General Chemistry, and Organic Chemistry — and the 40 Physics items. The Academic Average is a composite score computed from the mean of the Quantitative Reasoning, Reading Comprehension, Biology, General Chemistry, Organic Chemistry, and Physics standard scores. If an examinee does not

take a section of the test, they receive a raw score of zero and a standard score of 200 on that section.

Ideally, the mean score for each test on the OAT would always be exactly 300, assuming a comparably skilled set of examinees is completing the test. However, in any testing program, some variation in scores is inevitable; therefore the amount of drift from the ideal mean of 300 is constantly monitored. The OAT Program provides frequency tables for each OAT subtest regularly. This information provides guidance in interpreting the scores and insight into any drift from the expected mean score of 300.

Beginning May 1, 2009, recalibrated OAT scale scores were reported to candidates and programs. This occurred as part of the ongoing validation process for the OAT. ASCO had requested that the OAT reporting scale be recalibrated so the mean scale score would return to 300 with a standard deviation of 40. The data for this recalibration study was based on a reference group of examinees taking the OAT for the first time in 2008. The rescaling for each subtest on the OAT was accomplished through the use of the Rasch model, which takes both examinee ability and item difficulty into account.

The new scale had the following major implications for OAT scores:

- Scores obtained under the new and old scales were not directly comparable. A score of 300 on the old scale, for example, did not have the same conceptual meaning as a score of 300 on the new scale.
- When reviewing examinees' scores, the date the test was taken and differences in the scale required consideration.
- The recalibration did not change the OAT's difficulty. Scores achieved after May 1, 2009 were somewhat lower than those achieved prior to the recalibration date because the mean score was set back to be as close as possible to 300. This did not indicate a change in test takers' skill levels.
- Scores achieved prior to May 2009 can be compared with other scores from within that prior time period, and scores achieved after May 2009 are comparable with other scores from May 2009 forward. However, scores from different time periods (e.g., scores from May 2008 vs. scores from May 2010) are not considered directly comparable.
  - For example, an examinee who tested in May 2009 and December 2009 would have been scored on the same score scale, and thus the two sets of scores could be directly compared.
  - The scores of an examinee who tested in January 2009 and retested in July 2009 are not directly comparable, because the test is essentially on a different measurement scale across those two different time periods.

Information on the details of this change was distributed to all optometry schools, pre-health education advisors, and potential examinees in March of 2009. Frequency distributions, or percentile equivalents of scale scores, for the new OAT subtest scales were generated, and the means and standard deviations for the scale scores were computed.

## Evaluation of the Optometry Admission Test Program

When considering an examination's effectiveness, two basic psychometric aspects of tests must be considered: Reliability and validity.

Reliability is the precision or consistency of the assessment. For the OAT Program, a measure of internal consistency reliability, KR-20, is calculated for each scale (with the exception of the Academic Average for which a composite reliability estimate is determined). Table 1 lists reliability estimates based on administrations of the OAT occurring in 2025.

To ensure the OAT is capable of fulfilling its purpose, it is essential to understand the content and predictive validity evidence available for each section of the test. For the OAT, Test Construction Team members provide support for content validity. These individuals are experts in the subject areas corresponding to their team. For the Reading Comprehension Test, passages and items are produced by writers typically possessing a minimum of a master's degree in English language arts or the sciences, in addition to educational writing experience.

Predictive validity is assessed by examining correlations among OAT scores and students' grades in their first and second years of optometry school. The predictive power of the OAT varies from school to school and from one OAT section to another. The *OAT Validity Study* report provides detailed information on this topic, and is available at [ADA.org/OAT](https://ada.org/OAT). Validity is also addressed in the article, *Validity of the Optometry Admission Test in Predicting Performance in Schools and Colleges of Optometry* (Kramer & Johnston, 1997).

### Introduction to the Tables

The tables in this report describe performance on the OAT by gender, ethnic identification, and Hispanic origin. Correlations among the OAT disciplines are also presented.

The data in the tables are based on examinees who chose to self-report their gender and ethnic identification. Not all examinees chose to do so. The total count for each table varies because some examinees chose not to answer the questions, but the percentages will add up to 100% because the data is based solely on respondents. The columns for gender, ethnicity, and Hispanic origin—as well as for total percentage and total count—can be added vertically. The statistics in the tables in this User Guide were based on all participating examinees.

The OAT Program publishes an *OAT Candidate Guide* each year with information about the testing policies, procedures, and eligibility requirements for the calendar year. For additional information concerning the requirements that were applicable to the tested group, please consult the *OAT Candidate Guide* which is available at [ADA.org/OAT](https://ada.org/OAT).

### References

Kramer, G.A. & Johnston, J. (1997). Validity of the Optometry Admission Test in predicting performance in schools and colleges of optometry. *Optometric Education*, 22(2), 53-59.

## Part Two: 2025 Data Tables

**Table 1**  
**Overall Descriptive Statistics**  
**2025**

N = 3,581	Number of Items	Mean	S.D.	Reliability
Quantitative Reasoning	40	316.6	46.35	0.86
Reading Comprehension	50	329.1	43.41	0.81
Biology	40	309.4	52.41	0.88
General Chemistry	30	305.5	49.99	0.83
Organic Chemistry	30	298.8	48.65	0.86
Physics	40	282.2	41.98	0.89
Total Science	140	296.9	49.15	0.95
Academic Average	230	307.8	39.15	0.96

N = Number of administrations.  
S.D. = Standard deviation.

**Table 2**  
**Optometry Admission Test**  
**2025**  
**Biology Score by Gender**

Score	Females	Males	Total	Count
200	2.5%	1.9%	2.4%	84
210	1.0%	0.9%	1.0%	35
220	2.2%	1.9%	2.1%	75
230	2.7%	1.1%	2.3%	82
240	2.8%	2.3%	2.7%	95
250	6.7%	5.5%	6.4%	230
260	4.8%	2.3%	4.2%	150
270	6.3%	5.5%	6.1%	219
280	8.3%	8.1%	8.3%	295
290	6.0%	4.8%	5.7%	203
300	7.4%	8.2%	7.6%	272
310	8.0%	7.1%	7.8%	278
320	5.4%	6.1%	5.5%	198
330	5.4%	7.4%	5.9%	211
340	4.3%	4.9%	4.5%	160
350	4.5%	6.1%	4.8%	173
360	4.9%	6.9%	5.3%	191
370	3.1%	3.7%	3.3%	117
380	3.9%	4.7%	4.1%	146
390	1.9%	1.9%	1.9%	68
400	7.9%	8.7%	8.1%	289
Percentage	76.09%	23.91%	100.00%	3571
Mean	307.22	316.23	309.38	
SD	52.67	50.99	52.41	
Count	2717	854	3571	

**Table 3**  
**Optometry Admission Test**  
**2025**  
**General Chemistry Score by Gender**

Score	Females	Males	Total	Count
200	2.3%	1.3%	2.1%	74
210	0.7%	0.5%	0.6%	23
220	2.4%	1.5%	2.2%	78
230	2.3%	2.3%	2.3%	82
240	4.9%	3.2%	4.5%	159
250	5.7%	3.9%	5.2%	187
260	6.4%	5.3%	6.2%	220
270	7.3%	5.0%	6.7%	241
280	6.0%	5.0%	5.8%	206
290	7.4%	8.4%	7.7%	274
300	7.4%	7.3%	7.4%	264
310	8.4%	6.9%	8.0%	286
320	6.4%	8.3%	6.9%	246
330	6.6%	6.4%	6.6%	235
340	5.7%	6.0%	5.8%	206
350	3.8%	3.9%	3.8%	137
360	4.5%	6.8%	5.1%	181
370	2.1%	2.1%	2.1%	75
380	2.4%	3.0%	2.5%	91
390	2.4%	3.5%	2.7%	96
400	4.8%	9.4%	5.9%	210
Percentage	76.09%	23.91%	100.00%	3571
Mean	302.46	315.26	305.52	
SD	49.39	50.71	50.00	
Count	2717	854	3571	

**Table 4**  
**Optometry Admission Test**  
**2025**  
**Organic Chemistry Score by Gender**

Score	Females	Males	Total	Count
200	1.7%	1.1%	1.6%	56
210	1.9%	0.6%	1.6%	57
220	2.5%	2.2%	2.5%	88
230	3.5%	3.3%	3.4%	122
240	4.9%	3.4%	4.5%	161
250	5.3%	5.4%	5.3%	191
260	8.4%	6.2%	7.8%	280
270	6.4%	7.4%	6.7%	238
280	9.1%	8.7%	9.0%	320
290	8.1%	8.8%	8.2%	294
300	6.8%	5.2%	6.4%	228
310	8.1%	6.9%	7.8%	279
320	6.0%	6.0%	6.0%	214
330	5.5%	7.0%	5.9%	210
340	4.6%	4.9%	4.6%	166
350	3.9%	5.4%	4.3%	152
360	2.8%	3.3%	2.9%	103
370	3.3%	4.1%	3.5%	125
380	2.0%	2.7%	2.2%	77
390	1.8%	2.2%	1.9%	69
400	3.5%	5.4%	3.9%	141
Percentage	76.09%	23.91%	100.00%	3571
Mean	296.78	305.34	298.83	
SD	48.32	49.13	48.64	
Count	2717	854	3571	

**Table 5**  
**Optometry Admission Test**  
**2025**  
**Reading Comprehension Score by Gender**

Score	Females	Males	Total	Count
200	0.3%	0.1%	0.3%	9
210	0.1%	0.0%	0.1%	4
220	0.4%	0.1%	0.3%	11
230	1.3%	0.5%	1.1%	39
240	0.8%	0.8%	0.8%	30
250	2.2%	1.6%	2.1%	74
260	2.2%	2.3%	2.2%	80
270	4.2%	3.9%	4.1%	146
280	6.2%	5.3%	6.0%	213
290	6.2%	6.3%	6.2%	223
300	6.1%	5.4%	5.9%	211
310	8.8%	9.6%	9.0%	322
320	7.4%	6.4%	7.2%	256
330	10.1%	11.0%	10.3%	368
340	7.9%	9.6%	8.3%	298
350	7.1%	7.1%	7.1%	253
360	7.8%	6.7%	7.5%	268
370	1.6%	1.1%	1.5%	53
380	8.2%	9.8%	8.6%	308
390	1.7%	1.9%	1.7%	61
400	9.4%	10.4%	9.6%	344
Percentage	76.09%	23.91%	100.00%	3571
Mean	328.14	332.05	329.08	
SD	43.80	42.06	43.42	
Count	2717	854	3571	

**Table 6**  
**Optometry Admission Test**  
**2025**  
**Physics Score by Gender**

Score	Females	Males	Total	Count
200	2.0%	0.9%	1.7%	61
210	3.2%	1.3%	2.7%	97
220	3.6%	2.2%	3.3%	118
230	4.6%	3.0%	4.2%	150
240	6.9%	4.6%	6.4%	227
250	12.1%	8.9%	11.4%	406
260	6.5%	5.7%	6.3%	225
270	11.6%	10.1%	11.2%	400
280	7.3%	9.6%	7.8%	279
290	10.1%	10.3%	10.1%	362
300	6.6%	7.5%	6.8%	242
310	7.3%	8.1%	7.4%	266
320	4.6%	5.9%	4.9%	174
330	4.0%	5.2%	4.3%	154
340	3.0%	4.4%	3.3%	119
350	2.2%	3.3%	2.5%	89
360	1.5%	3.9%	2.0%	73
370	0.8%	0.8%	0.8%	29
380	1.1%	2.1%	1.3%	48
390	0.6%	0.8%	0.6%	23
400	0.6%	1.4%	0.8%	29
Percentage	76.09%	23.91%	100.00%	3571
Mean	279.01	292.20	282.16	
SD	41.32	42.44	41.96	
Count	2717	854	3571	

**Table 7**  
**Optometry Admission Test**  
**2025**  
**Quantitative Reasoning Score by Gender**

Score	Females	Males	Total	Count
200	0.8%	0.1%	0.7%	24
210	0.7%	0.1%	0.5%	19
220	1.3%	0.6%	1.1%	39
230	1.8%	0.7%	1.6%	56
240	1.8%	1.1%	1.7%	59
250	4.7%	1.3%	3.9%	139
260	4.0%	2.7%	3.7%	132
270	6.8%	4.4%	6.2%	223
280	6.5%	4.6%	6.0%	215
290	9.3%	6.9%	8.8%	313
300	8.9%	6.9%	8.4%	301
310	6.9%	5.7%	6.6%	237
320	9.9%	8.5%	9.5%	341
330	5.4%	6.9%	5.8%	206
340	7.1%	7.8%	7.3%	261
350	5.2%	8.0%	5.8%	208
360	4.5%	7.7%	5.2%	187
370	4.5%	7.5%	5.2%	187
380	1.8%	2.6%	2.0%	72
390	2.1%	4.9%	2.7%	98
400	5.9%	10.9%	7.1%	254
Percentage	76.09%	23.91%	100.00%	3571
Mean	311.74	332.26	316.65	
SD	45.98	44.24	46.39	
Count	2717	854	3571	

**Table 8**  
**Optometry Admission Test**  
**2025**  
**Total Science Score by Gender**

Score	Females	Males	Total	Count
200	2.3%	1.1%	2.0%	72
210	1.3%	0.8%	1.1%	41
220	3.4%	1.9%	3.0%	108
230	3.3%	2.5%	3.1%	110
240	5.4%	3.7%	5.0%	178
250	7.6%	4.8%	6.9%	248
260	7.5%	6.6%	7.3%	259
270	9.0%	7.3%	8.6%	306
280	7.4%	8.8%	7.7%	275
290	7.8%	6.1%	7.4%	265
300	7.1%	6.7%	7.0%	250
310	6.7%	8.4%	7.1%	253
320	5.1%	6.9%	5.5%	197
330	4.8%	7.4%	5.4%	193
340	4.7%	5.3%	4.9%	174
350	3.8%	3.7%	3.8%	134
360	3.2%	3.6%	3.3%	118
370	3.1%	3.5%	3.2%	114
380	1.5%	1.6%	1.5%	54
390	1.8%	3.4%	2.2%	79
400	3.4%	6.0%	4.0%	143
Percentage	76.09%	23.91%	100.00%	3571
Mean	293.78	306.57	296.84	
SD	48.81	48.98	49.15	
Count	2717	854	3571	

**Table 9**  
**Optometry Admission Test**  
**2025**  
**Academic Average Score by Gender**

Score	Females	Males	Total	Count
200	0.0%	0.0%	0.0%	0
210	0.0%	0.0%	0.0%	1
220	0.8%	0.2%	0.7%	24
230	1.8%	0.7%	1.5%	54
240	2.5%	1.4%	2.2%	80
250	4.3%	2.3%	3.9%	138
260	5.9%	4.0%	5.5%	195
270	8.2%	7.0%	7.9%	283
280	10.1%	6.6%	9.3%	331
290	10.1%	8.1%	9.6%	343
300	9.2%	9.7%	9.4%	334
310	8.1%	10.1%	8.6%	306
320	8.8%	8.1%	8.6%	308
330	7.0%	10.4%	7.8%	278
340	5.6%	7.3%	6.0%	214
350	4.7%	6.4%	5.1%	183
360	4.5%	4.7%	4.6%	163
370	3.7%	5.6%	4.1%	148
380	2.7%	4.0%	3.0%	108
390	1.3%	2.8%	1.6%	58
400	0.6%	0.6%	0.6%	22
Percentage	76.09%	23.91%	100.00%	3571
Mean	305.02	316.41	307.74	
SD	39.11	38.09	39.16	
Count	2717	854	3571	

**Table 10**  
**Optometry Admission Test**  
**2025**  
**Biology Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	6.3%	1.0%	4.1%	0.0%	3.7%	1.3%	2.6%	69
210	0.0%	0.8%	2.9%	0.0%	1.0%	0.7%	1.0%	27
220	0.0%	2.2%	1.8%	12.5%	2.0%	0.7%	2.0%	54
230	0.0%	1.6%	1.8%	12.5%	2.4%	0.7%	2.0%	53
240	12.5%	1.9%	2.3%	0.0%	3.1%	2.6%	2.7%	71
250	12.5%	6.0%	8.8%	12.5%	7.4%	4.6%	6.9%	183
260	0.0%	4.2%	3.5%	0.0%	3.9%	5.3%	4.0%	107
270	12.5%	4.9%	9.4%	12.5%	7.2%	7.9%	6.6%	175
280	12.5%	7.4%	11.1%	0.0%	7.6%	9.9%	7.9%	210
290	0.0%	5.6%	8.2%	0.0%	5.5%	7.2%	5.7%	153
300	0.0%	6.1%	7.6%	37.5%	9.4%	7.9%	8.0%	213
310	18.8%	8.0%	14.0%	0.0%	7.0%	7.2%	7.9%	210
320	0.0%	5.6%	5.3%	0.0%	5.7%	5.3%	5.6%	148
330	6.3%	6.6%	1.8%	0.0%	5.4%	4.6%	5.6%	148
340	6.3%	4.8%	4.1%	0.0%	4.0%	6.6%	4.4%	118
350	6.3%	6.0%	2.9%	0.0%	4.9%	2.0%	5.0%	134
360	6.3%	6.5%	1.8%	0.0%	4.9%	2.6%	5.2%	138
370	0.0%	3.7%	1.2%	0.0%	3.1%	4.6%	3.3%	87
380	0.0%	5.1%	2.3%	0.0%	3.7%	3.3%	4.1%	109
390	0.0%	1.9%	0.0%	0.0%	1.5%	2.6%	1.6%	43
400	0.0%	10.2%	5.3%	12.5%	6.5%	12.5%	8.1%	216
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	286.88	317.22	292.69	283.75	304.33	315.13	308.80	
SD	45.42	51.83	47.82	56.80	52.44	51.75	52.39	
Count	16	985	171	8	1334	152	2666	

**Table 11**  
**Optometry Admission Test**  
**2025**  
**General Chemistry Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	1.6%	2.9%	0.0%	2.2%	0.7%	1.9%	51
210	6.3%	0.3%	0.6%	0.0%	1.0%	0.0%	0.7%	18
220	0.0%	1.4%	4.1%	12.5%	2.5%	1.3%	2.2%	58
230	12.5%	1.8%	1.8%	0.0%	2.8%	0.0%	2.3%	60
240	6.3%	4.0%	10.5%	0.0%	4.9%	3.9%	4.8%	129
250	12.5%	4.0%	6.4%	0.0%	5.8%	1.3%	5.0%	132
260	0.0%	4.6%	9.4%	12.5%	6.8%	9.2%	6.3%	167
270	0.0%	7.2%	11.1%	12.5%	6.4%	6.6%	7.0%	187
280	6.3%	4.6%	7.0%	0.0%	6.4%	9.9%	5.9%	158
290	12.5%	6.6%	10.5%	12.5%	7.3%	9.9%	7.4%	198
300	18.8%	6.2%	8.2%	0.0%	7.8%	11.2%	7.5%	199
310	12.5%	8.6%	7.0%	12.5%	8.4%	2.6%	8.1%	216
320	0.0%	8.5%	5.8%	0.0%	5.6%	9.9%	6.9%	184
330	6.3%	7.2%	3.5%	25.0%	6.7%	7.2%	6.8%	180
340	0.0%	6.3%	0.6%	0.0%	5.8%	3.3%	5.5%	146
350	0.0%	3.7%	4.7%	0.0%	3.4%	3.9%	3.6%	95
360	6.3%	5.7%	0.6%	12.5%	5.3%	4.6%	5.1%	137
370	0.0%	2.0%	2.3%	0.0%	1.8%	3.3%	2.0%	53
380	0.0%	3.2%	1.2%	0.0%	2.1%	2.0%	2.4%	65
390	0.0%	3.9%	0.0%	0.0%	2.4%	1.3%	2.7%	72
400	0.0%	8.6%	1.8%	0.0%	4.6%	7.9%	6.0%	161
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	280.00	314.38	283.16	296.25	301.31	310.07	305.33	
SD	41.15	50.55	42.63	45.34	49.51	45.84	49.95	
Count	16	985	171	8	1334	152	2666	

**Table 12**  
**Optometry Admission Test**  
**2025**  
**Organic Chemistry Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	1.4%	3.5%	0.0%	1.5%	0.7%	1.5%	41
210	0.0%	1.0%	5.3%	0.0%	1.4%	0.0%	1.4%	38
220	0.0%	2.3%	2.3%	0.0%	2.6%	3.9%	2.6%	68
230	0.0%	2.6%	5.3%	0.0%	3.8%	5.3%	3.5%	94
240	12.5%	4.1%	5.8%	0.0%	5.9%	2.6%	5.1%	135
250	0.0%	5.0%	7.0%	0.0%	6.1%	6.6%	5.7%	153
260	18.8%	6.8%	15.2%	0.0%	9.2%	7.2%	8.6%	230
270	6.3%	5.5%	8.8%	25.0%	7.0%	5.9%	6.6%	175
280	6.3%	7.8%	10.5%	12.5%	9.2%	9.9%	8.8%	235
290	6.3%	8.7%	7.0%	12.5%	7.8%	7.2%	8.1%	215
300	12.5%	6.0%	5.3%	25.0%	6.4%	5.9%	6.3%	167
310	12.5%	7.2%	6.4%	0.0%	7.3%	9.9%	7.4%	196
320	12.5%	6.9%	4.1%	0.0%	4.9%	7.9%	5.8%	154
330	6.3%	6.2%	2.9%	12.5%	5.6%	6.6%	5.7%	153
340	6.3%	4.8%	3.5%	0.0%	4.4%	1.3%	4.3%	115
350	0.0%	5.1%	1.8%	0.0%	4.1%	3.9%	4.3%	114
360	0.0%	3.9%	1.8%	0.0%	2.7%	0.0%	2.9%	77
370	0.0%	4.4%	2.3%	12.5%	3.3%	2.6%	3.6%	96
380	0.0%	2.8%	0.0%	0.0%	1.9%	2.6%	2.2%	58
390	0.0%	2.5%	0.0%	0.0%	1.7%	1.3%	1.9%	50
400	0.0%	5.0%	1.2%	0.0%	2.8%	8.6%	3.8%	102
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	289.38	305.53	276.14	301.25	294.50	300.99	297.76	
SD	31.72	49.75	42.75	33.99	47.68	50.46	48.78	
Count	16	985	171	8	1334	152	2666	

**Table 13**  
**Optometry Admission Test**  
**2025**  
**Reading Comprehension Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	0.4%	0.6%	0.0%	0.0%	0.0%	0.2%	5
210	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%	0.1%	3
220	0.0%	0.1%	0.0%	0.0%	0.3%	0.7%	0.2%	6
230	0.0%	1.2%	1.2%	0.0%	1.2%	0.0%	1.1%	30
240	0.0%	1.0%	0.6%	0.0%	0.7%	0.7%	0.8%	21
250	6.3%	1.6%	3.5%	0.0%	1.4%	2.0%	1.7%	45
260	0.0%	2.4%	1.8%	0.0%	2.2%	0.7%	2.1%	57
270	6.3%	3.4%	7.6%	0.0%	4.4%	2.0%	4.1%	109
280	6.3%	6.2%	8.8%	37.5%	6.0%	3.3%	6.2%	165
290	0.0%	6.2%	7.0%	12.5%	5.3%	3.9%	5.7%	151
300	18.8%	6.1%	8.2%	0.0%	5.6%	4.6%	6.0%	159
310	6.3%	10.4%	8.8%	12.5%	7.7%	9.9%	8.9%	237
320	0.0%	7.2%	7.0%	0.0%	7.3%	8.6%	7.2%	193
330	6.3%	10.8%	10.5%	0.0%	9.7%	8.6%	10.0%	267
340	18.8%	7.9%	8.2%	12.5%	9.3%	5.9%	8.6%	229
350	0.0%	6.4%	8.2%	12.5%	7.0%	11.2%	7.1%	189
360	6.3%	7.6%	5.3%	0.0%	7.9%	10.5%	7.7%	206
370	0.0%	1.4%	0.6%	0.0%	1.7%	0.0%	1.4%	38
380	0.0%	8.7%	7.0%	0.0%	8.9%	9.9%	8.7%	232
390	0.0%	1.1%	1.2%	0.0%	2.4%	3.3%	1.9%	50
400	25.0%	9.6%	4.1%	12.5%	10.9%	14.5%	10.3%	274
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	332.50	328.49	318.19	316.25	332.27	341.05	330.42	
SD	49.19	43.25	41.00	43.73	43.32	41.31	43.26	
Count	16	985	171	8	1334	152	2666	

**Table 14**  
**Optometry Admission Test**  
**2025**  
**Physics Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	0.9%	2.3%	0.0%	2.2%	2.0%	1.7%	45
210	0.0%	2.1%	7.0%	0.0%	3.0%	2.0%	2.9%	76
220	6.3%	2.4%	10.5%	0.0%	3.7%	1.3%	3.5%	94
230	6.3%	4.3%	5.3%	25.0%	3.7%	5.3%	4.2%	111
240	25.0%	4.7%	8.8%	0.0%	7.6%	4.6%	6.5%	173
250	12.5%	10.2%	15.8%	0.0%	11.6%	8.6%	11.1%	297
260	6.3%	4.3%	8.8%	25.0%	7.4%	7.9%	6.4%	171
270	12.5%	10.6%	8.8%	12.5%	11.9%	7.2%	11.0%	292
280	12.5%	9.0%	7.0%	12.5%	6.6%	10.5%	7.8%	208
290	6.3%	9.9%	9.4%	0.0%	9.8%	9.9%	9.8%	261
300	0.0%	8.0%	5.3%	12.5%	6.1%	8.6%	6.9%	184
310	12.5%	8.5%	4.1%	0.0%	6.4%	9.2%	7.2%	192
320	0.0%	6.0%	4.1%	0.0%	4.5%	6.6%	5.1%	136
330	0.0%	4.3%	0.0%	0.0%	5.3%	3.9%	4.5%	119
340	0.0%	4.1%	0.6%	0.0%	3.2%	3.3%	3.3%	89
350	0.0%	2.7%	0.6%	12.5%	2.3%	2.6%	2.4%	64
360	0.0%	3.5%	1.2%	0.0%	1.6%	1.3%	2.3%	60
370	0.0%	1.2%	0.0%	0.0%	0.7%	0.0%	0.8%	21
380	0.0%	1.6%	0.0%	0.0%	1.0%	2.0%	1.2%	33
390	0.0%	0.7%	0.6%	0.0%	0.4%	2.6%	0.6%	17
400	0.0%	1.0%	0.0%	0.0%	0.9%	0.7%	0.9%	23
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	261.25	288.88	260.58	272.50	278.54	287.50	282.10	
SD	27.29	42.31	35.90	39.19	41.78	42.66	42.21	
Count	16	985	171	8	1334	152	2666	

**Table 15**  
**Optometry Admission Test**  
**2025**  
**Quantitative Reasoning Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	0.4%	2.3%	0.0%	0.5%	0.0%	0.6%	15
210	0.0%	0.2%	1.8%	0.0%	0.6%	0.0%	0.5%	13
220	0.0%	0.8%	3.5%	0.0%	0.8%	0.0%	0.9%	25
230	6.3%	1.5%	3.5%	0.0%	1.3%	0.7%	1.5%	41
240	0.0%	0.8%	1.8%	0.0%	2.2%	0.0%	1.5%	41
250	0.0%	4.1%	5.8%	12.5%	4.0%	2.6%	4.1%	109
260	0.0%	2.5%	5.3%	12.5%	3.5%	4.6%	3.3%	89
270	0.0%	6.1%	7.6%	12.5%	5.6%	4.6%	5.9%	156
280	6.3%	5.6%	10.5%	12.5%	5.9%	6.6%	6.2%	164
290	43.8%	7.3%	12.3%	25.0%	9.1%	3.9%	8.6%	229
300	6.3%	8.3%	9.4%	12.5%	8.7%	5.9%	8.4%	225
310	6.3%	7.4%	7.6%	0.0%	6.4%	6.6%	6.9%	183
320	6.3%	10.4%	9.4%	0.0%	8.2%	11.2%	9.2%	246
330	0.0%	5.2%	3.5%	0.0%	5.2%	9.9%	5.3%	142
340	6.3%	7.0%	8.8%	0.0%	7.8%	7.2%	7.5%	200
350	0.0%	7.1%	4.1%	0.0%	6.4%	4.6%	6.3%	169
360	12.5%	6.5%	0.0%	0.0%	5.5%	2.0%	5.4%	143
370	0.0%	5.7%	1.2%	0.0%	5.9%	9.9%	5.7%	152
380	0.0%	2.5%	0.0%	0.0%	1.8%	3.9%	2.1%	55
390	6.3%	2.9%	1.2%	12.5%	2.8%	3.3%	2.8%	75
400	0.0%	7.6%	0.6%	0.0%	7.4%	12.5%	7.3%	194
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	307.50	321.38	290.82	291.25	317.77	331.05	317.99	
SD	38.73	45.22	40.55	43.24	46.58	44.58	46.21	
Count	16	985	171	8	1334	152	2666	

**Table 16**  
**Optometry Admission Test**  
**2025**  
**Total Science Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	1.2%	4.7%	0.0%	2.5%	1.3%	2.1%	55
210	0.0%	0.8%	1.8%	0.0%	1.2%	0.0%	1.0%	27
220	0.0%	2.4%	4.1%	0.0%	3.4%	1.3%	2.9%	78
230	12.5%	2.2%	2.9%	12.5%	4.0%	2.0%	3.2%	86
240	6.3%	4.3%	9.9%	0.0%	5.7%	3.3%	5.3%	141
250	12.5%	6.0%	17.0%	0.0%	7.2%	5.9%	7.3%	195
260	0.0%	5.9%	9.4%	25.0%	8.2%	8.6%	7.5%	199
270	18.8%	7.3%	8.8%	25.0%	8.8%	13.2%	8.6%	229
280	25.0%	7.5%	8.8%	0.0%	7.8%	8.6%	7.9%	210
290	0.0%	6.4%	5.3%	0.0%	7.8%	7.2%	7.0%	187
300	18.8%	7.9%	7.6%	12.5%	5.6%	6.6%	6.8%	180
310	0.0%	7.2%	7.6%	12.5%	6.7%	10.5%	7.1%	190
320	0.0%	6.4%	1.8%	0.0%	5.2%	3.9%	5.3%	141
330	0.0%	6.7%	2.3%	0.0%	5.1%	2.0%	5.3%	141
340	6.3%	4.8%	1.8%	0.0%	5.5%	2.0%	4.8%	127
350	0.0%	4.6%	1.2%	0.0%	3.4%	5.3%	3.8%	101
360	0.0%	3.9%	2.3%	0.0%	2.9%	4.6%	3.3%	88
370	0.0%	3.9%	1.8%	0.0%	2.8%	3.3%	3.1%	83
380	0.0%	1.8%	0.0%	0.0%	1.3%	2.6%	1.5%	39
390	0.0%	3.0%	0.6%	12.5%	2.2%	2.0%	2.4%	64
400	0.0%	5.8%	0.6%	0.0%	2.8%	5.9%	3.9%	105
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	273.13	305.50	272.16	286.25	292.35	302.24	296.34	
SD	29.15	49.79	40.87	48.68	48.62	48.38	49.29	
Count	16	985	171	8	1334	152	2666	

**Table 17**  
**Optometry Admission Test**  
**2025**  
**Academic Average Score by Ethnic Identification**

Score	Native American	Asian	Black	Pacific Islander	White	Multi	Total	Count
200	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
210	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
220	0.0%	0.6%	1.2%	0.0%	0.6%	0.7%	0.6%	17
230	0.0%	0.8%	4.1%	0.0%	1.5%	0.0%	1.3%	35
240	0.0%	1.8%	4.1%	0.0%	2.5%	0.7%	2.2%	59
250	0.0%	2.8%	3.5%	0.0%	4.6%	2.0%	3.7%	98
260	18.8%	4.3%	8.2%	12.5%	6.5%	1.3%	5.6%	149
270	0.0%	7.0%	19.9%	12.5%	7.8%	9.9%	8.4%	223
280	25.0%	8.9%	11.1%	25.0%	9.4%	9.9%	9.5%	253
290	12.5%	8.7%	11.7%	12.5%	10.0%	8.6%	9.6%	256
300	12.5%	8.2%	7.0%	12.5%	9.1%	15.1%	9.0%	241
310	12.5%	8.6%	9.9%	12.5%	7.9%	9.9%	8.4%	225
320	0.0%	9.4%	8.8%	0.0%	8.3%	7.9%	8.7%	231
330	12.5%	9.1%	1.8%	0.0%	7.9%	4.6%	7.8%	207
340	6.3%	6.5%	2.3%	0.0%	5.7%	5.9%	5.8%	154
350	0.0%	5.2%	2.3%	0.0%	6.1%	3.9%	5.3%	142
360	0.0%	6.2%	1.8%	0.0%	3.7%	5.9%	4.6%	122
370	0.0%	4.2%	1.8%	12.5%	4.3%	5.9%	4.2%	111
380	0.0%	4.5%	0.0%	0.0%	3.0%	2.0%	3.3%	87
390	0.0%	2.2%	0.6%	0.0%	0.7%	3.3%	1.4%	37
400	0.0%	0.8%	0.0%	0.0%	0.5%	2.6%	0.7%	19
Percentage	0.60%	36.95%	6.41%	0.30%	50.04%	5.70%	100.00%	2666
Mean	293.75	313.66	287.54	295 .00	305.73	314.93	307.91	
SD	25.27	39.28	32.88	34.23	38.74	38.67	39.07	
Count	16	985	171	8	1334	152	2666	

**Table 18**  
**Optometry Admission Test**  
**2025**  
**OAT Scores by Examinees of Hispanic Origin**

Score	BIO	GCH	OCH	RCT	PHY	QRT	TS	AA
200	4.4%	4.6%	2.8%	0.2%	3.0%	1.4%	3.0%	0.0%
210	1.4%	0.9%	3.0%	0.0%	3.2%	1.2%	3.2%	0.2%
220	4.4%	5.1%	3.5%	0.9%	4.6%	2.5%	5.3%	1.2%
230	3.0%	3.0%	3.2%	1.8%	8.1%	2.8%	6.0%	2.5%
240	5.8%	5.8%	6.0%	1.8%	13.1%	3.7%	7.6%	6.0%
250	9.2%	9.0%	6.7%	4.8%	14.1%	6.0%	11.3%	7.1%
260	3.5%	7.1%	10.4%	2.3%	6.5%	7.6%	6.0%	9.2%
270	6.7%	6.7%	6.7%	5.5%	11.8%	9.0%	8.3%	10.1%
280	8.1%	5.8%	10.6%	8.1%	8.8%	9.0%	6.9%	9.0%
290	4.1%	7.8%	8.3%	9.2%	7.4%	11.3%	7.1%	11.1%
300	10.1%	11.3%	7.8%	8.8%	3.7%	8.3%	9.4%	10.1%
310	8.1%	6.2%	8.5%	6.5%	6.2%	4.1%	8.3%	8.8%
320	6.5%	6.9%	5.1%	6.7%	2.1%	8.8%	4.6%	7.1%
330	4.8%	5.8%	5.1%	10.4%	2.5%	4.1%	1.8%	5.3%
340	3.2%	4.4%	3.9%	6.7%	2.8%	5.3%	3.7%	4.4%
350	3.7%	2.3%	2.1%	6.2%	1.4%	3.5%	1.2%	3.0%
360	2.3%	3.2%	0.7%	5.1%	0.0%	2.8%	2.5%	1.2%
370	2.3%	1.2%	2.3%	1.8%	0.0%	3.9%	0.9%	2.5%
380	3.0%	0.5%	0.9%	5.1%	0.7%	1.2%	0.9%	0.9%
390	1.4%	0.9%	0.5%	1.2%	0.0%	0.5%	0.7%	0.0%
400	4.1%	1.6%	2.1%	6.9%	0.2%	3.2%	1.2%	0.2%
Mean	292.76	285.85	284.72	316.31	265.65	295.97	277.51	290.88
SD	51.53	45.83	44.27	44.69	36.51	44.97	44.17	35.97
Count	434	434	434	434	434	434	434	434

BIO=Biology, GCH=General Chemistry, OCH=Organic Chemistry, RCT=Reading Comprehension Test, PHY=Physics, QRT=Quantitative Reasoning Test, TS=Total Science, and AA=Academic Average.

**Table 19**  
**Correlations among OAT Disciplines (N=3,581)**  
**2025**

	BIO	GEN	ORG	QRT	RCT	PHY	TS
BIO							
GEN	0.71						
ORG	0.70	0.72					
QRT	0.58	0.65	0.57				
RCT	0.52	0.51	0.42	0.58			
PHY	0.69	0.74	0.69	0.67	0.51		
TS	0.88	0.89	0.87	0.70	0.56	0.89	
AVG	0.85	0.88	0.83	0.81	0.70	0.86	0.96

BIO = Biology; GEN = General Chemistry; ORG=Organic Chemistry; QRT = Quantitative Reasoning Test;  
 RCT=Reading Comprehension Test; PHY = Physics; TS= Total Science; AVG=Academic Average.

**Part Three: Test Specifications**  
**Survey of Natural Sciences: Biology**

**40 items**

**1.1 Cell and Molecular Biology**

- 1.1.1 Cell metabolism
- 1.1.2 Cellular processes
- 1.1.3 Thermodynamics
- 1.1.4 Mitosis/meiosis
- 1.1.5 Cell structure and function
- 1.1.6 Experimental cell biology
- 1.1.7 Biomolecules
- 1.1.8 Integrated relationships

**1.2 Diversity of Life**

- 1.2.1 Viruses
- 1.2.2 Archaeobacteria
- 1.2.3 Eubacteria
- 1.2.4 Fungi
- 1.2.5 Protista
- 1.2.6 Plantae
- 1.2.7 Animalia
- 1.2.8 Integrated relationships

**1.3 Structure and Function of Systems**

- 1.3.1 Integumentary
- 1.3.2 Skeletal
- 1.3.3 Muscular
- 1.3.4 Circulatory
- 1.3.5 Lymphatic/immune
- 1.3.6 Digestive
- 1.3.7 Respiratory
- 1.3.8 Urinary
- 1.3.9 Nervous/sensory
- 1.3.10 Endocrine
- 1.3.11 Reproductive
- 1.3.12 Integrated relationships

**1.4 Genetics**

- 1.4.1 Molecular genetics
- 1.4.2 Human genetics
- 1.4.3 Classical genetics
- 1.4.4 Chromosomal genetics
- 1.4.5 Genetic technology
- 1.4.6 Developmental mechanisms
- 1.4.7 Genomics
- 1.4.8 Gene expression
- 1.4.9 Epigenetics
- 1.4.10 Integrated relationships

**1.5 Evolution and Ecology**

- 1.5.1 Natural selection
- 1.5.2 Population genetics/speciation
- 1.5.3 Animal behavior
- 1.5.4 Ecology
- 1.5.5 Integrated relationships

## Survey of Natural Sciences: General Chemistry

30 items

### 1. Stoichiometry and General Concepts

- A. Percent composition
- B. Empirical formulae
- C. Balancing equations
- D. Moles and molecular formulas
- E. Molar mass
- F. Density
- G. Calculations from balanced equations

### 2. Gases

- A. Kinetic molecular theory of gases
- B. Dalton's gas law
- C. Boyle's gas law
- D. Charles's gas law
- E. Ideal gas law

### 3. Liquids and Solids

- A. Intermolecular forces
- B. Phase changes
- C. Vapor pressure
- D. Structures
- E. Polarity
- F. Properties

### 4. Solutions

- A. Polarity
- B. Properties
  - 1. Colligative
  - 2. Non-colligative
- C. Forces
- D. Concentration calculations

### 5. Acids and Bases

- A. pH
- B. Strength
- C. Brønsted-Lowry reactions
- D. Calculations

### 6. Chemical Equilibria

- A. Molecular
- B. Acid/base
- C. Precipitation
- D. Calculations
- E. Le Chatelier's principle

### 7. Thermodynamics and Thermochemistry

- A. Laws of thermodynamics
- B. Hess's law
- C. Spontaneity
- D. Enthalpies and entropies
- E. Heat transfer

### 8. Chemical Kinetics

- A. Rate laws
- B. Activation energy
- C. Half-life

### 9. Oxidation-Reduction Reactions

- A. Balancing equations
- B. Determination of oxidation numbers
- C. Electrochemical calculations
- D. Electrochemical concepts and terminology

### 10. Atomic and Molecular Structure

- A. Electron configuration
- B. Orbital types
- C. Lewis-Dot diagrams
- D. Atomic theory
- E. Quantum theory
- F. Molecular geometry
- G. Bond types
- H. Sub-atomic particles

### 11. Periodic Properties

- A. Representative elements
- B. Transition elements
- C. Periodic trends
- D. Descriptive chemistry

### 12. Nuclear Reactions

- A. Balancing equations
- B. Binding energy
- C. Decay processes
- D. Particles
- E. Terminology

### 13. Laboratory

- A. Basic techniques
- B. Equipment
- C. Error analysis
- D. Safety
- E. Data analysis

## Survey of Natural Sciences: Organic Chemistry

30 items

1. **Mechanisms: Energetics and Structure**
  - A. Elimination
  - B. Addition
  - C. Free radical
  - D. Substitution mechanisms
  - E. Other mechanisms and reactions
2. **Chemical and Physical Properties of Molecules**
  - A. Spectroscopy
    1.  $^1\text{H}$  NMR
    2.  $^{13}\text{C}$  NMR
    3. Infrared
    4. Multi-spectra
  - B. Structure
    1. Polarity
    2. Intermolecular forces (solubility, melting/boiling point, etc.)
  - C. Laboratory theory and techniques (i.e. TLC, separations, etc.)
3. **Stereochemistry (Structure Evaluation)**
  - A. Chirality
  - B. Isomer relationships
  - C. Conformations
4. **Nomenclature**
  - A. IUPAC rules
  - B. Functional groups in molecules
5. **Individual Reactions of the Major Functional Groups and Combinations of Reactions to Synthesize Compounds**
  - A. Alkene/Alkyne
    1. General
    2. One-step
    3. Multi-step
  - B. Aromatic
    1. General
    2. One-step
    3. Multi-step
  - C. Substitution/Elimination
    1. General
    2. One-step
    3. Multi-step
  - D. Aldehyde/Ketone
    1. General
    2. One-step
    3. Multi-step
  - E. Carboxylic acids and derivatives
    1. General
    2. One-step
    3. Multi-step
  - F. Other
    1. General
    2. One-step
    3. Multi-step
6. **Acid-Base Chemistry**
  - A. Ranking Acidity/Basicity
    1. Structure Analysis
    2. pH/pKa data analysis
  - B. Prediction of products and equilibria
7. **Aromatics and Bonding**
  - A. Concept of aromaticity
  - B. Resonance
  - C. Atomic/molecular orbitals
  - D. Hybridization
  - E. Bond angles/lengths

## **Reading Comprehension**

The Reading Comprehension Test contains three reading passages on various scientific topics. Prior understanding of the science topics is not a prerequisite to answering the test items. The reading passages require the ability to read, comprehend, and thoroughly analyze basic scientific information.

The reading passages contain approximately 1,000 to 1,500 words each. Each passage is followed by approximately 15 to 20 items. The total number of items for all three passages is 50.

## **Physics**

**40 items**

- |    |                               |     |  |
|----|-------------------------------|-----|--|
| 1. | <b>Units and Vectors</b>      | 8.  | <b>Waves</b>                             |
| 2. | <b>Linear Kinematics</b>      | 9.  | <b>Fluid Statics</b>                     |
| 3. | <b>Statics</b>                | 10. | <b>Thermodynamics and Thermal Energy</b> |
| 4. | <b>Dynamics</b>               | 11. | <b>Electrostatics</b>                    |
| 5. | <b>Rotational Motion</b>      | 12. | <b>D.C. Circuits</b>                     |
| 6. | <b>Energy and Momentum</b>    | 13. | <b>Optics</b>                            |
| 7. | <b>Simple Harmonic Motion</b> |     |  |

## Quantitative Reasoning

40 Items

### 1. Mathematical Problems

- 1.1 Algebra
  - 1.1.1. Equations and expressions
  - 1.1.2. Inequalities
  - 1.1.3. Exponential notation
  - 1.1.4. Absolute value
  - 1.1.5. Ratios and proportions
  - 1.1.6. Graphical analysis

1.2 Data Analysis

1.3 Interpretation and Sufficiency

1.4 Quantitative Comparison

1.5 Probability and Statistics

### 2. Applied Mathematics (Word) Problems

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March 2026