



PREDICTING RESPIRATORY GRADUATION AND EMPLOYMENT IN THE CRAFTON HILLS COLLEGE RESPIRATORY PROGRAM (V2)

A Review of Five Possible Assessment Options to Help Predict
CHC Student Respiratory Graduation and Employment

Prepared by Keith Wurtz
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Introduction

In spring of 2013 the Crafton Hills College (CHC) Respiratory Program contacted the CHC Office of Institutional Effectiveness, Research & Planning (OIERP) to discuss how the Respiratory Program currently admits students to the program. In brief, students are awarded 3 points for successfully completing the following three courses: RESP-050 (Introduction to Respiratory Care, AH-101 (Medical Terminology), and ANAT-101 (Essentials of Human Anatomy and Physiology). In addition, students can earn additional points by successfully completing MICRO-102 (Introductory Microbiology), CHEM-101 (Introduction to Chemistry), and earning General Education units required for an AS Degree. Students with all six points are entered into a lottery because there are always more students than available spots in the program.

The Respiratory Care Faculty have identified a concern in the past few years that some of the students admitted to the program may not have the emotional intelligence to perform effectively in the workplace. Due to the lottery students who may be more able to effectively perform in the workplace are being excluded from the Respiratory program. Emotional Intelligence is defined as "...the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions." (Salovey & Mayer, 1990, pp. 189). Research has indicated that emotional intelligence is related to work performance (Farh, Seo, & Tesluk, 2012). As a result, the CHC Respiratory Faculty have anecdotally observed that students with low emotional intelligence have not been able to find a job and they are concerned that students who are more likely to succeed in the program and in the workplace are being excluded from the program. In addition, in the last three years the CHC Respiratory Graduation rate has declined from 87% in 2009 to 83% in 2011.

As a result, the CHC Respiratory Care Faculty wanted to examine the possibility of expanding or revising the current prerequisites to the program in order to possibly increase the likelihood of admitting students to the program that are more likely to successfully complete the program and to be employed. Consequently, this report examines the following prerequisite testing possibilities as a possible addition to the admission requirements:

1. Crafton Hills College (CHC) Assessment
2. Test of Essential Academic Skills (TEAS-V)
3. Health Occupations Basic Entrance Test (HOBET V)
4. Health Occupation Aptitude Examination (HOAE)
5. Motivated for Strategies Learning Questionnaire (MSLQ)

Summary of Results

More Likely Respiratory Assessment Options

- The HOBET V was designed specifically to help respiratory programs identify the candidates most likely to successfully complete the program
 - The HOBET V assesses math, science, English, and language usage knowledge
 - The cost is **\$35** which can be passed along to the student
 - **A second assessment, Self-Assessment Inventory, for an additional cost of \$16 assesses a student's learning styles, critical thinking skills, professional characteristics, and work values**
 - Additional resources are available for students
 - Research indicates that for each additional point earned on the assessment, the odds of a student completing their academic program is increased by 8%
 - The assessment is 3.5 hours long and must be completed when started
 - Implementing the assessment would require collaborating with Crafton's Testing Center
- The HOAE was developed by the Psychological Services Bureau (PSB). PSB has been designing entry level examination for health profession education programs since 1955.
 - The HOAE assesses academic aptitude, spelling, reading comprehension, information in the natural sciences, and **includes a vocational adjustment index that assesses a person's ability to be able to adjust to the healthcare profession as a student and a practitioner**
 - The cost is **\$20** and some schools charge more to cover their expenses
 - Research on the predictive ability of the assessment was not provided
 - Implementing the assessment would require collaborating with Crafton's Testing Center

Less Likely Respiratory Assessment Options

- The CHC Assessment was not examined as an option for predicting respiratory program completion because only 4 respiratory students had assessed in the last three years
- The TEAS was designed to predict success in nursing programs and is not for respiratory programs
- The MSLQ assesses motivation and learning strategies but would take at least 2 – 4 years to collect and analyze data and the MSLQ was not specifically designed for health care programs

Findings

The CHC Respiratory Faculty provided the OIERP with a list of three Respiratory student cohorts from 2009 to 2011. The list included SIDs, whether or not the student successfully graduated and completed the Respiratory program, and whether or not the student was employed in the Respiratory field.

The CHC Respiratory graduation rate has decreased from 87% in 2009 to 83% in 2011. In addition, the employment rate has ranged from 64% to 85% in the last three years (see Table 1).

Table 1: Number and Percent of Respiratory Students who Graduated, became Employed, and who Assessed from 2009 to 2011 by Cohort Year.

Cohort	Graduated			Employed			Assessed		
	#	N	%	#	N	%	#	N	%
2009	54	62	87.1	46	54	85.2	0	35	0.0
2010	33	33	100.0	21	33	63.6	0	33	0.0
2011	29	35	82.9	23	29	79.3	4	35	11.4
Total	116	130	89.2	90	116	77.6	4	103	3.9

Note: “#” refers to the number of students who graduated, were employed, or were assessed. “N” refers to the number of students in each Respiratory Cohort, and “%” refers to the graduation rate, employment rate, or the percent of Respiratory students that completed the assessment.

The following illustrates the results from examining the five different assessment options: using the results from the Crafton Hills College (CHC) Assessment, the Test of Essential Academic Skills, the Health Occupations Basic Entrance Test, the Health Occupations Aptitude Examination, and the Motivated for Strategies Learning Questionnaire.

Crafton Hills College (CHC) Assessment

One idea to identify possible predictors of Respiratory Graduation was to examine the possibility of using the CHC Assessment Test and educational background measures. Only four Respiratory students in the past three years completed the assessment (see Table 1). As a result, using the CHC Assessment is not a valid option to use as a predictor of graduation or employment in the respiratory field unless the Respiratory Program wants to begin to assess students and examine the predictive validity of the assessment on graduation and employment. It is important to remember that the CHC Assessment was not designed to predict success in a Respiratory Program and that to gather a large enough sample will likely take approximately 2 – 4 years.

Test of Essential Academic Skills (TEAS)

The Test of Essential Academic Skills (TEAS) was designed by the [Nursing Division of the Assessment Technologies Institute](#). TEAS is a test of basic knowledge in science, reading, English and math and is also an aptitude test to predict success in nursing school. Accordingly, since the test was specifically designed for nursing students it was not examined further.

Health Occupations Basic Entrance Test (HOBET V)

The Health Occupations Basic Entrance Test (HOBET V) was also designed by the [Allied Health Division of the Assessment Technologies Institute \(ATI\)](#) to help Respiratory Care programs identify candidates more likely to successfully complete the program. The exam was designed by allied health professionals and normed for specific allied health programs. Moreover, the exam assesses reading, math, science, English, and language usage knowledge. The HOBET V test is

209 minutes long (3.5 hours): reading is 58 minutes, mathematics is 51 minutes, science is 66 minutes, and English is 34 minutes. Fifty-five percent of the test focuses on foundational thinking and 45% of the test focuses on critical thinking. (see Appendix A for a more detailed description of each test and sample questions).

The HOBET V was designed as an Allied Health pre-admissions test tool to help assess readiness for the allied health **field** as well as a tool that can be used to identify areas where support will be needed in the form of early remediation (Ascend Learning, LLC, 2012). In addition to the [HOBET V Test](#), ATI also provides the following resources for students:

- [Learning Strategies Textbook](#) – Research based study guide provides students with the knowledge and tips needed to become excellent students before they begin an Allied Health certification program.
- [Discover Health Occupations Readiness Test](#) – A comprehensive aptitude test measuring abilities in reading, math, science, and English and language usage. The test helps identify students with the best chance of success in an Allied Health **program**.
- [Achieve](#) – Online learning program that provides students with the extra help they need to acquire and master the basic classroom skills.
- [Self-Assessment Inventory](#) – An online questionnaire designed to be taken at the beginning of an allied health program that identifies a student's learning styles, critical thinking skills, professional characteristics, and work values. Lower cost and focuses on non-cognitive aspects. Takes about 45 minutes. 195 questions. \$16 per student. Most programs use this assessment with career counselor.

OIERP Questions asked of HOBET V Representative

1. Which test predicts success in a Respiratory Care Program more effectively, the HOBET V or the Discover Health Occupations Readiness Test?

Most respiratory programs use HOBET. Research indicates that for each additional point earned on the HOBET, the odds of a student completing their academic program are increased by 7.7%. The sample used for this research largely consists of students in respiratory care programs.

2. The HOBET V is 3.5 hours long, is it possible to take at different times or does the test need to be completed in one continuous testing session?

One the test has started the student is required to complete the entire test. ATI also offers the Discover assessment which takes 1.75 hours to complete instead of almost 4 hours. It was designed for programs that are less than 18 months long and includes the same types and categories of questions. The cost is also \$35.

3. What is the cost and what additional services are provided? How does the cost work?

The test costs \$35 per student. Paying \$35 includes the assessment, remediation information for students, and in-depth scoring. Most schools make the test a prerequisite requirement. Students can go online and purchase the test with the testing center for an extra \$10 or they can purchase the test with a credit card in the testing center. Crafton can also purchase tests in bulk; however, most programs have students pay the cost.

4. Are there any other Respiratory Care programs using either test and can we contact some of them?

ATI was not able to provide contact information; however, they suggested that we Google the "HOBET respiratory care admission requirements." The links to three community colleges using the HOBET are available below along with the cut-scores used to admit students to each respiratory program.

- [Quinsigamond Community College](#) in Massachusetts requires a composite score of 52% or higher to be eligible for the program
- [Brookdale Community College](#) in New Jersey requires a composite score of 50% or higher to be eligible for the program.
- [Midlands Technical College](#) in South Carolina requires a composite score of 50 to 60% depending on other criteria to be eligible for the program.

Health Occupations Aptitude Examination (HOAE)

The Health Occupations Aptitude Examination was developed by the [Psychological Services Bureau \(PSB\)](#). PSB has been designing entry level examinations for health profession education programs since 1955 when nursing education professionals sought to identify with greater accuracy the potential for an applicant's successful completion of the educational program.

The HOAE consists of five parts:

- Academic aptitude
- Spelling
- Reading comprehension
- Information in the natural sciences
- Vocational adjustment index

Academic Aptitude assesses the ability of a student to learn by assessing verbal, arithmetic, and non-verbal aptitudes. The non-verbal aspect consists of test items that examine a students' recognition of relationships between objects. The spelling, reading comprehension and natural science components all assess skills in those areas. The Vocational Adjustment Index assesses a person's characteristic life style and their distinctive educational and occupational adjustment. The adjustment index assesses a person's ability to be able to adjust to the healthcare profession as a student and a practitioner.

OIERP Questions asked of HOAE Representative

1. How effective does the HOAE predict success in Respiratory Programs and in the workplace?

This information was not provided by PSB.

2. What is the cost and what additional services are provided? How does the cost work?

The cost for each test is \$20 and some schools charge more to cover their expenses. No other information was provided to HOAE as to how the cost works and the process for how Craffon would pay for the tests.

3. Are there any other Respiratory Care programs using the HOAE and can we contact some of them?

Contact information for each college can be obtained by requesting the information from the Office of Institutional Effectiveness, Research & Planning.

- [Amarillo College](#) – The respiratory program at Amarillo requires students to pay the \$20 testing fee and to make an appointment to take the test with their testing center. Students receive the following points in the [admission process](#) for their score on the test: 0 points for 0-24%, 5 points for 25-49%, 10 points for 50-74%, and 15 points for 75-100%. Points for the HOAE test are one of many methods in which applicants can receive points.
- [San Joaquin Valley College](#) – Applicants to the Respiratory Therapy program are selected based on points earned in an evaluation process that includes assessment, transcript review, professional reference and personal interview.
- [Metropolitan Community College-NE, South Omaha Campus](#) – As part of the admissions process students are required to complete the PSB Health Occupations Exam. In addition, students are also required to provide two completed reference forms where the person recommending the student is required to rate the student applicants abilities on characteristics like punctuality, problem solving approaches, and the ability to make and retain friends.

4. How are cut-scores identified and/or how is the test used to admit students to a program?

HOAE recommends that respiratory care programs do not except anyone with a score below the 25th percentile ranking. The percentile rankings were derived from applicants who to the test for the specific career education program and depict where each students fits amongst the larger group.

5. Can the testing proctor be located in the testing station?

Materials on the HOAE web site suggested that the testing proctor needs to be viewing students taking the test using a video camera and not in the room with the student. However, according to the response from HOAE, the testing proctor may be located in the testing area and should be if there are no cameras and other monitoring devices.

HOAE Student Resources

PSB provides students [access](#) to [sample questions](#), [how to understand the results](#), and other resources that include [test-taking tips](#) and a view on [psychological testing](#).

HOAE Testing Requirements

The HOAE has very stringent [testing requirements](#) and after discussion with an HOAE representative it does appear that Crafton would meet those requirements. Tests can only be purchased by individuals with a doctorate degree in psychology or a related discipline, be under the direct supervision of a qualified psychologist, or be certified as a health care profession. In addition, a keyboard is only used to enter demographic information and must be placed out of the way once the testing begins, and the testing stations need to be separated by partitions.

Motivated for Strategies Learning Questionnaire (MSLQ)

The Motivated for Strategies Learning Questionnaire (MSLQ) was designed to identify aspects of student motivation that may predict student success. The MSLQ was not designed for health care programs, but has been used in numerous educational settings to improve the learning of students. A more detailed summary of the reliability and validity of the MSLQ and how it has been used can be found by clicking [here](#).

The MSLQ measures 15 different student characteristics having to do with motivation and learning strategies. Research has indicated that 11 of those measures predict final course grades (Pintrich, Smith, Garcia, & MckEachie, 1993). The strongest predictors of final course grade were self-efficacy and meta-cognitive self-regulation. The self-efficacy scale measures a student's expectancy of success and their judgment of their own ability and meta-cognitive self-regulation measures the ability of students to control and monitor their own cognition. The other sub-scales measuring motivation in the MSLQ include intrinsic and extrinsic goal orientation, task value, control of learning beliefs, and test anxiety. The learning strategies sub-scales measured in the MSLQ include rehearsal, elaboration, organization, critical thinking, time and student environment, management, effort regulation, peer learning, and help-seeking.

As long as the MSLQ is used for educational purposes it is free. However, in order to use the assessment the CHC Respiratory Program would need to assess at least three entering cohorts of students and identify the best predictors of program completion and employment. This would take time, possible 2 – 4 years. In addition, the MSLQ was not designed for allied health programs.

References

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- Salovey, P., & Mayer, J.D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, 9, 185-211. Retrieved June 12, 2013 from http://www.unh.edu/emotional_intelligence/EIAssets/EmotionalIntelligenceProper/EI1990%20Emotional%20Intelligence.pdf

Any questions regarding this report can be directed to the Office of Institutional Effectiveness, Research, and Planning at (909) 389-3206 or you may send an email to kwurtz@craftonhills.edu: 1314_PredictingRespiratoryGraduation.docx; 2009to2011_CoARCDData_Updated.sav.

Appendix A: HOBET V Test Descriptions and Sample Questions



HOBET®V
Health Occupations Basic Entrance Test

HOBET®-V Objectives

The following list contains objectives that may be assessed on HOBET®-V.

READING (28% of entire test)

Paragraph and Passage Comprehension (13% of entire test)

- Identify appropriate primary sources, including Internet sources.
- Analyze the use of topic and summary sentences.
- Distinguish between fact and opinion, biases, and stereotypes.
- Identify the logical conclusion given a reading selection.
- Identify topic, main idea, supporting details, and themes.
- Identify the author's intent to persuade, inform, entertain, or express feelings from a given statement or set of statements.
- Use prior knowledge to make predictions, inferences, and draw conclusions about a piece of literature.
- Analyze and evaluate the use of text structure (e.g., sequence, problem-solution, comparison-contrast, description, cause-effect).
- Identify the author's position and purpose for writing the text.
- Identify the characteristics of different passage types (e.g., narrative, expository, technical, persuasive).
- Interpret the possible influences of the historical context on a literary work.
- Recognize ways that literature from different cultures presents similar themes differently across genres.

Informational Source Comprehension (15% of entire test)

- Follow a given set of directions.
- Identify the correct definition of a word when given the word in context and a sample dictionary entry in which the definition of the word may be found.
- Demonstrate understanding of a label's ingredients and directions by selecting the product best suited for a specific purpose when given a choice of consumer products, inclusive of food and medicine.
- Identify specific information from a printed communication (e.g., a memo, posted announcement, or classified ad).
- Identify from an index or table of contents the page or pages of a publication where specified information may be found.
- Identify the appropriate source for locating information given a specific topic and a list of information sources (e.g., road atlas, card catalog, dictionary, owner's manual, database, encyclopedia).
- Analyze the use of headings and subheadings.
- Analyze and use text features (e.g., bold text).
- Identify appropriate information from a graphic representation of information.
- Identify scale readings when given a picture of a standard measurement instrument.
- Use the legend and key of a sample map to identify specified information.
- Identify which product information supports a conclusion that one product is the more economical buy when given descriptions of like products of comparable quality and product



information (e.g., quantity, delivery charges, costs).

- Identify specified information from a sample yellow page from a telephone book.
- Identify specified information from a sample listing of items and costs (e.g., a menu, movie listings, costs for different groups of people).

MATHEMATICS (20% of entire test)

Numbers and Operations (13% of entire test)

- Convert between percents, fractions, and decimals.
- Identify the correct decimal placement in a product when given a multiplication problem involving decimal numbers (includes division).
- Calculate percents (e.g., percent of a number, the percent increase or decrease).
- Solve word problems involving percentages.
- Use mathematical reasoning or computational procedures to solve one- or two-step word problems with fractions or decimals.
- Divide two fractions or mixed numbers (includes multiplication).
- Add two fractions or mixed numbers with unlike denominators (includes subtraction).
- Use mathematical reasoning or computational procedures to solve one- or two-step word problems with whole numbers.
- Solve word problems involving ratios, proportions, and rate of change.
- Estimate the solution to a problem.
- Subtract whole numbers with regrouping.
- Convert irrational numbers into approximate decimal form and vice versa.
- Convert between Roman and Arabic numerals.
- Determine the amount of take-home pay when given a salary and the deductions for a stated period of time.
- Identify the cost of a given set of items, exclusive of tax, given an advertisement, menu, or other price list.

- Reconcile a checking or savings account when given the previous balance and transactions for a period of time.
- Apply the order of operations.
- Determine, when given information about an event, the quantity of material needed or cost of planning an event.
- Compare and order rational numbers.

Algebraic Applications (3% of entire test)

- Solve equations with one unknown (e.g., whole numbers, ratios).
- Add, subtract, multiply, and divide polynomial terms.
- Translate word phrases and sentences into expressions, equations, and inequalities and vice versa.
- Solve equations or inequalities involving absolute values.

Data Interpretation (2% of entire test)

- Organize data using tables, charts, and graphs.
- Read and interpret data from line, bar, or circle graphs.
- Determine the dependent and independent variables of a given set of data.

Measurement (3% of entire test)

- Convert quantities from one measurement scale to another measurement scale.
- Estimate metric quantities.
- Use appropriate units of measure and measurement tools to accurately measure the length, weight, height and volume of an object.
- Determine a measurement based on another given measurement (e.g., use a scale on a map to determine the distance between two cities)



SCIENCE (32% of entire test)

Human Body Science (7% of entire test)

- Describe the functions of the circulatory system.
- Describe the functions of the digestive system.
- Describe the functions of the nervous system.
- Describe the functions of the respiratory system.
- Describe the functions of the immune system.
- Describe the general anatomy and physiology of a human.
- Explain that populations grow or decline through the combined effects of births and deaths, and through emigration and immigration.
- Identify various factors that influence birth rates and fertility rates.

Life Science (10% of entire test)

- Explain the process of natural selection and adaptation.
- Explain the biological classification system.
- Identify parts of a cell and its function (e.g., energy production, transportation of molecules, waste disposal, synthesis of new molecules, storage of genetic material).
- Identify the structure and function of cellular organelles.
- Explain that cells can differentiate.
- Compare and contrast mitosis and meiosis.
- Compare and contrast photosynthesis and respiration.
- Describe the structures and functions of nucleic acids, to include DNA and RNA.
- Explain that changes in DNA (mutations) occur spontaneously at low rates, and that only mutations in the germ cell can create the variation that changes an organism's offspring.
- Describe how RNA and DNA are involved in cell replication.
- Explain that heredity information is stored in genes.

- Compare and contrast chromosomes, genes, proteins, RNA, and DNA.
- Describe the differences between phenotypes and genotypes.
- Apply Mendel's laws of genetics and the Punnett square.

Earth and Physical Science (9% of entire test)

- Identify the sun as the major external source of energy.
- Balance and identify important chemical reactions, including oxidation/reduction and acid/base reactions.
- Identify the purpose of catalysts.
- Recognize that enzymes are protein molecules.
- Use pH scale to identify acid and base solutions.
- Identify chemical bonds between atoms in common molecules (e.g., common hydrocarbons).
- State the chemical properties of water.
- Distinguish among kinetic energy, potential energy, and other energy contained by a field.
- Identify the measurable properties of atoms, including mass and electrical charge.
- Identify protons, neutrons, and electrons as major components of an atom.
- Explain that chemical bonds result when electrons are shared or transferred between atoms.
- Explain the physical and chemical patterns within the Periodic Table of Elements.
- Explain the difference of the atoms or molecules in liquids, gases, and solids.
- Compare and contrast evaporation, vaporization, and condensation.



Scientific Reasoning (5% of entire test)

- Identify questions and concepts that guide scientific investigations, including formulation and testing of hypotheses
- Use technology and mathematics to improve investigations and communications.
- Formulate and revise scientific explanations (including conclusions) and models using logic and evidence.
- Recognize and analyze alternative explanations and models.
- Communicate and defend a scientific argument.
- Identify reasons for conducting investigations.
- Identify reasons for including technology and mathematics in science research.

ENGLISH AND LANGUAGE USAGE

(20% of entire test)

Grammar and Word Meanings in Context
(10% of entire test)

- Use grammar for a stylistic effect and to enhance clarity in writing.
- Apply subject-verb agreement rules.
- Apply pronoun-antecedent agreement rules.
- Identify and use different parts of speech (e.g., possessives, pronouns, adjectives, adverbs, verbs).
- Use dialogue correctly.
- Use first, second, and third person narrative voice.
- Use context clues to determine the meaning of words or phrases.

- Determine the meaning of words by analyzing word structure; identifying roots, prefixes, suffixes; and using word origins (e.g., Anglo-Saxon, Latin, Greek).

Spelling and Punctuation (6% of entire test)

- Apply rules of spelling (including homophones, irregular plurals, and contractions).
- Correct misspelled words.
- Apply the rules of capitalization.
- Apply the rules of ellipses, commas, semicolons, colons, hyphens, and parentheses.
- Apply the rules of quotation marks and apostrophes.

Structure (4% of entire test)

- Demonstrate sentence fluency by techniques such as varying beginnings, lengths, and patterns of sentences; creating sentences that flow together well; and using a variety of sentence structures.
- Use sentences (usually 5 or more) to form organized and logical paragraphs.
- Write simple sentences (e.g., identify, correct, or complete simple sentences).



HOBET-V Sample Questions

The following questions are sample multiple-choice questions. These questions should not be interpreted as representing the difficulty or exact content covered on the HOBET. The correct answers are at the end of these practice questions.

READING SAMPLE QUESTIONS

Read the following passage and answer questions 1 and 2.

The 2,315-mile Missouri River tops this year's list of the "10 Most Endangered Rivers in North America," compiled annually by the conservation group American Rivers. The "Big Muddy" has been dammed, channeled, and diked to the point that one-fifth of the species native to the river and its floodplain are now classified as endangered, threatened, or of special concern, according to American Rivers. The other nine rivers on the list are New York's Upper Hudson, Washington's White Salmon, California's San Joaquin, Wisconsin's Wolf River, Arizona's Pinto Creek and Potomac, Ohio's Mill Creek, the Lower Colorado and the Tennessee River.

1. Which of the following may be concluded from the passage?
 - A. Wolf River is located in Washington, DC.
 - B. Bodies of water with "creek" in their names are not rivers.
 - C. The damming, diking, and channeling of a river is detrimental to the organisms that inhabit it.
 - D. The rivers of North America have been found to be more endangered than those of South America.
2. A conservation group organizes for which of the following principal purposes?
 - A. Collecting data for scientific research
 - B. Saving rain forests
 - C. Channeling rivers
 - D. Preserving nature



MATHEMATICS SAMPLE QUESTIONS

3. Thirty percent of the students in a mathematics class received an "A." If 18 students received an "A," which of the following represents the number of students in the class?
- A. 18
 - B. 30
 - C. 54
 - D. 60
4. A student earns \$1,280.50 each month at a part-time job. The student pays the following amounts for expenses each month:

Rent.....	\$350.00
Food.....	\$320.00
Utilities.....	\$215.60
Car expenses	\$240.00

After paying the monthly expenses listed above, which of the following represents the amount of money the student has left for other expenses?

- A. \$106.70
- B. \$154.90
- C. \$1,075.60
- D. \$1,125.60

SCIENCE SAMPLE QUESTIONS

5. Which of the following characteristics is a property of bases?
- A. Taste sour
 - B. Dissolve metals
 - C. Turn blue litmus red
 - D. Liberate OH^- in solution
6. The bladder is part of which of the following systems?
- A. Urinary
 - B. Nervous
 - C. Muscular
 - D. Cardiovascular



ENGLISH AND LANGUAGE USAGE SAMPLE QUESTIONS

7. The rapacity of our vile, disgusting, and despicable stepfather was not satisfied until he had taken all that we had.

Which of the following words are redundant in the sentence above?

- A. rapacity, vile
- B. vile, disgusting
- C. rapacity, despicable
- D. disgusting, despicable

8. Jennifer mailed a sympathy card to the family of the dead man in a hurry.

Which of the following phrases is misplaced in the sentence above?

- A. in a hurry
- B. to the family
- C. of the dead man
- D. Jennifer mailed a sympathy card

SOLUTIONS TO SAMPLE QUESTIONS

Sample Question Number	Answer
1	C
2	D
3	D
4	B
5	D
6	A
7	B
8	A