Abstract: This paper is divided into four sections. The first section briefly reviews the requirements for the Certified Purchasing Manager (C.P.M.) and Accredited Purchasing Practitioner (A.P.P.). The second section discusses study and test taking skills that are useful for many that are preparing for the C.P.M. and A.P.P. examinations. The third section is a discussion of how to use the C.P.M. and (A.P.P.) Diagnostic Kits to prepare for the C.P.M. and/or A.P.P. Examinations. The final section provides test taking tips that many have found useful.

I. Overview of the Requirements for the C.P.M. and A.P.P. Applicants for the C.P.M. certification must (a) pass all four modules of the C.P.M. examination and have either (b) five years full-time purchasing and supply management experience, or (c) a four-year degree from an accredited institution and three years of full-time experience in purchasing and supply management. Applicants for the A.P.P. must (a) pass both modules of the A.P.P. examination and have either (b) two years of professional work experience, or (3) an associate’s degree from and accredited institution and one year of professional experience. For detailed requirements for original, renewal, and lifetime certification, visit napm.org and click on “Certification (C.P.M. & A.P.P.).

II. Developing Your C.P.M./A.P.P. Examination Study and Test Taking Skills. Many preparing for the C.P.M. or A.P.P. examination have not studied or taken a major examination in years. As a result, there is a need for these individuals to develop their study and test taking skills.

Study Skills. This section focuses on the basics of study and then provides guidance on time management as it relates to studying for the C.P.M or A.P.P. examination. The objectives of study are to develop an overview of the material to be learned, capture that material in your short-term memory and then move the material into your long-term memory, where it can be retrieved during the examination and beyond. These basics are referred to as S-Q-R-R-R, or S, Q, R-cubed. The following summarizes these five steps.

S: SURVEY or scan the material to get an overview of the concepts to be learned. This gives you a "map" of the material to be studied. For example, an overview of C.P.M. Examination tells you that the examination is organized into four modules and that each module is divided into parts and tasks. Module 1, Purchasing Process, is divided into four parts and twenty tasks. Module 2, Supply Environment, is divided into five parts and seventeen tasks. Module 3, Value Enhancement Strategies, is divided into four parts and sixteen tasks. Finally, Module 4, Management, is divided into two parts and fourteen tasks. Notice that the C.P.M. Examination can be broken down into sixty-seven relatively manageable tasks (The A.P.P. Examination - Modules 1 and 2 - can be broken down into thirty-seven tasks).

Q: QUESTION what are the main concepts? In the case of the C.P.M. and A.P.P. examinations, studying the tasks within each module provide a great deal of insight into the importance of the various concepts.

R: READ and re-read is not the most efficient method of study for most students. Developing outlines, highlighting key concepts, underlining important points, and making notes in page margins all help you to focus on the main concepts and begin to move these concepts into long-term memory.
R: RECITE and/or write down the information, depending on your learning style. This helps you to better move information into long-term memory, and then retrieve that material from long-term memory.

R: REVIEW the material. This phase of your study helps you practice and develop your skills at retrieving information from long-term memory.

**Time Management.** This section provides guidance on when to study, where to study, and how to handle the rest of the world.

**When to Study.** If you have not studied recently, studying will be difficult and/or boring at first. As time goes by, and as you begin to recognize that you are learning new information, the level of boredom will decrease. It never disappears. Be aware of your best time of day to study. Consider using waiting time and other nonproductive times to study.

**Where to Study.** Find a regular study area where you will waste less time. Consider organizing your materials into a brief case, closet, shelf, or drawer where you can find them with a minimum of lost time. Find a study area where you will be alert and reasonably free from distractions. Some prefer a quiet location while others prefer background noise. Places that have been useful to others include libraries, the office, the bedroom, the basement, restaurants, parks, and laundries.

**How to Handle the Rest of the World.** The following are some helpful hints that help you manage your time more effectively. Pay attention to how you are using your time. Make an agreement with your living mates about study time. Get off the phone! Learn to say "no" to other people when you study. Hang a "Do Not Disturb" sign on your door. Organize your study materials so that your can begin studying with a minimum of preparation. Avoid noise distractions, learn to tune out your surroundings. Notice how others misuse your time.

**Test Taking Skills.** This section focuses on the basics of taking multiple-choice examinations and provides insights into stress management as it relates to study and test-taking.

**IF YOU ARE WELL STUDIED** you have the knowledge base to pass all modules of the C.P.M. or A.P.P. examination that you have studied. Remember, you do not have to get all questions right. You only have to achieve a scaled score of fifty-five or better to pass a module. Examination of the diagnostic suggests that a raw score of 70% or better on any version of any of the examinations will yield a scaled score of fifty-five or better.

The majority of questions on the C.P.M. and A.P.P. examinations will be "cake" questions that you will be able to answer **IF YOU ARE WELL STUDIED.** A typical four item multiple choice question will have one correct answer, one distractor (to catch those who are not well studied or misread the question), and two incorrect answers.

**IF YOU ARE WELL STUDIED,** three answers do not make sense, and the fourth answer is something you do not recognize choose the fourth answer. Use your knowledge base to eliminate the three wrong answers!

**IF YOU ARE WELL STUDIED** you will usually find that your first inclination is your best answer. Except when you have previously misread a question, you will change more correct answers to incorrect answers than incorrect answers to correct answers when you second guess yourself. Be careful about letting your self-doubts talk you out of the correct answer.
Stress Reducing Techniques. Some stress is normal (a lack of stress is called "boredom"). Stress is part of the "fight or flight" responses that result from challenges in our life. Some suggestions for managing examination stress include:

- Beware of "pre-test sabotage." Hurried question and answer sessions before beginning the examine can undermine your self-confidence. Don't do it.
- Answer the easy questions and come back to the harder ones. This improves your performance and builds your self-confidence. You may also recall information as you answer the questions that you know. This also removes the time pressure resulting from having dwelled too long on frustrating questions early in the examination.
- Remember to practice any one of several relaxation techniques to reduce tension when studying and during the test. They include deep breathing exercises, tense-relax techniques, and mental imagery.

III. GETTING THE MOST FROM THE C.P.M. AND A.P.P. EXAMINATION DIAGNOSTIC KITS
Developing an ability to effectively use the C.P.M. and A.P.P. diagnostic kits can help you evaluate your knowledge base, focus your study efforts, and improve your chances of doing well on the C.P.M. and A.P.P. examinations.

Using the Diagnostic Kits. This material is based on the C.P.M. Diagnostic Kit, Volume 1 - 2000. This diagnostic kit is organized into five sections. They are introduction; overview of the test; how to use the diagnostic kit; the diagnostic kit modules; and answer keys, scoring tables, conversion tables, and explanations for answers. It is a good idea to make photocopies of the scoring tables. This enables you to repeat the test without being influenced by answers that have been written in the scoring tables.

The process for using the diagnostic kit can be described in six steps. They are: (1) take the test, (2) score the test, (3) evaluate your overall performance on each module, (4) evaluate your performance on each task, (5) focus your study efforts, and (6) repeat steps 1 through 5.

Step 1: Take the Test. Module 1 is used in this exercise because it is common to the C.P.M. and the A.P.P. examinations. When taking the test try to find a place that will be free of noise and other distractions. Schedule 105 minutes for Modules 1, 2, and 3. Schedule 130 minutes for Module 4. You may use the paper or computerized diagnostic kit. If at all possible during the period that you are studying for a module, schedule two or three testing sessions that are at least two weeks apart. This enables you to critique improvements in your knowledge base without becoming sensitized to the answers to the test questions.

A sample scoring table for Module 1 is shown as Exhibit 1. A review of Exhibit 1 reveals that Module 1 has four parts and ninety questions. Please note that each group of questions is keyed into a specific task. For example, questions 1 through 6 test your understanding of Task 101.

Step 2: Score The Test. In Exhibit 1 a pattern of right and wrong answers for a hypothetical test taker is shown.

Step 3: Evaluate Your Performance on Each Module: The raw score of 46 on Exhibit 1 converts into a scaled score of 50, below that needed to pass. See the Conversion Tables in your diagnostic kit.

Step 4: Evaluate Your Performance on Each Task: For purposes of this paper 70% or more correct responses on a task are considered excellent, 50 to 69% are considered marginal, and below 50% are poor. Because of test equating, some versions of some modules require raw scores of less than 70% in
In order to achieve a scaled score of 55 but none require a raw score of 70% or higher. Inspection of the responses in Exhibit 1 indicate that three tasks (107, 116, and 118) have excellent scores - 70% or higher, eleven tasks (102, 103, 104, 105, 108, 109, 110, 112, 114, 117, and 120) have marginal scores - 50 to 69%, and six tasks (101, 106, 111, 113, 115, and 119) have poor scores - below 50%.

Exhibit 1
INITIAL SCORING TABLE FOR MODULE 1

<table>
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<th>MODULE - NUMBER</th>
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<th>MODULE - NUMBER</th>
<th>CORRECT/</th>
<th>MODULE - NUMBER</th>
<th>CORRECT/</th>
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</tr>
<tr>
<td>105</td>
<td>2/3</td>
<td>110</td>
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<td>115</td>
<td>1/3</td>
<td>120</td>
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</tbody>
</table>

Total Correct Module 1 46/90 = 51.1%
Scaled Score Module 1 50

Note: A Scaled Score of 55 or Higher is Need to Pass

Step 5: Focus Your Study Efforts. As a general guideline, your study efforts should focus on the tasks that need the most improvement. A rule of thumb is that tasks with raw scores below 50% should receive three times the study effort of tasks with raw scores of 70% or higher. Tasks with scores of 50 - 69% should receive about twice the study effort. While less time is spent reviewing tasks whose raw scores were 70% or higher, this review is essential for maintaining your knowledge base.

There are several approaches to studying and reviewing tasks. First, you may use the C.P.M. or A.P.P. Study Guide. Second, you may use the "Explanations for Answers" in the Diagnostic Kit. Many find that these explanations increase the student's knowledge, provide additional insights into the task, and help understand how members of test writing workshops think. Third, you may use other sources recommended for C.P.M. and/or A.P.P. preparation. Finally, you may use a combination of approaches. My experience is that the Study Guide and "Explanations for Answers" work very well. Some students may want to read additional materials.

Many have expressed confusion between what the study materials say and on-the-job practice at work. My advice "When studying for the C.P.M./A.P.P. examinations follow suit on what the study materials say." There is room for different good faith points of view regarding purchasing and supply management practice. The purchasing professional needs to recognize that these differences will occur from time to time.

Step 6: Repeat Steps 1 Through 5. After you have completed your study and review, repeat the examination. A gap of three or more weeks should reduce the chance that you will have become conditioned to the diagnostic examination. If you have studied effectively you should see your overall scores improve. Exhibit 2 is what a hypothetical scoring table might look like for someone who is well studied. Here the Diagnostic Kit can help you further refine your knowledge base and increase your chances of passing the C.P.M./A.P.P. examination. The following paragraphs discuss using the Diagnostic Kit to improve on an already strong performance. Since Exhibit 2 presents the results of Steps 1 (Take the test) and 2 (Score the test), the discussion begins with Step 3.
Exhibit 2
SUBSEQUENT SCORING TABLE FOR MODULE 1

<table>
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<tr>
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<th>Correct/ Module - Number</th>
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</table>

Total Correct Module 1 61/90 = 67.8%
Scaled Score Module 1 58

Note: A Scaled Score of 55 or Higher is Need to Pass

Step 3: Evaluate Your Overall Performance on Each Module: The raw score of 61 in Exhibit 2 converts into a scaled score of 58, above that needed to pass. However, further examination reveals that eight tasks have excellent scores (70% or greater), ten tasks have marginal scores (50 - 69%), two tasks have poor scores (less than 50%). Further study and review should focus on the marginal and weak tasks.

Step 4: Evaluate Your Performance on Each Task: Examination of Exhibit 2 reveals that eight tasks (102, 104, 106, 107, 109, 110,116, and 118) have excellent raw scores and need only review. Ten tasks (101, 103, 105, 108, 111, 113, 114, 117, 119, and 120) have marginal scores and need additional study. Two tasks (112 and 115) have poor scores and need much additional study. While a passing score has been achieved, the marginal and poor tasks could leave the individual vulnerable if his/her performance slips during the examination.

Step 5: Focus Your Study Efforts: The study strategy suggested by Exhibit 2 is to schedule to test the module. Between now and that time focus on the twelve tasks that have raw scores below 70% while continuing to review the eight tasks that have raw scores of 70% or higher.

IV. TEST TAKING TIPS

This section focuses on some of the details of taking the C.P.M. and A.P.P. examination at a computerized testing center. The majority of testing is now done at these centers.

1. Examinations are designed so that you cannot "accidentally" begin or end the examination.

2. The computerized examination has the capability for you to skip questions and mark questions for later review.

3. If possible, take the time to visit the test location before taking the examination.

4. Travel to the examination center so that you have some time before your appointment.

5. Wear loose comfortable garments that are layered. Remove clothes, if the testing center is too warm, or put something on if it is too chilly. Remember that your feet can be too warm or too cold!
6. You may bring only a pencil (or pen) and a non-programmable calculator to the examination. Paper will be provided.

7. After you complete the examination you will receive your score, a printout of your score, and a diagnostic of your performance on each task.

8. Get a good night's rest before the examination, do not over eat and drink before the examination. Remember that if you did well on the Diagnostic Kit you will probably do well on the examination.

9. Many who have passed the examination are normal people like you. I believe that anyone competent enough to effectively perform a purchasing and supply management job has enough mental ability to study for and pass any of the C.P.M. or A.P.P. modules.

10. GOOD LUCK!!!

**Conclusion.** Many students have found that the C.P.M. and A.P.P. Diagnostic Kits, together with polishing their study and test taking skills, have been valuable parts of their study program. I hope you find the insights provided in this paper useful.