How to Master the Multiple Choice Exam?

Often students anticipate their first multiple choice exam to be simply a matter of recognising true statements. However, experience with these exams shows students that they are often asked to do more than just recognise textbook material. Multiple choice questions, they learn, require fine distinctions between correct and nearly-correct statements. They learn that these distinctions are not only of Recognition, but are distinctions that involve the thinking for Synthesis, Analysis, and Application. These higher-order thinking questions sometimes make the content of the questions unrecognisable. Besides not being fully prepared for these types of thinking questions, students often read the questions carelessly. Therefore, it is to the students’ advantage to learn about the thinking required to answer multiple choice questions and to learn how to read the questions carefully.

Preparing/study for multiple choice exams
1. Learn how to recognise the various levels of learning that are tested in multiple choice questioning;
2. Learn how to use new strategies for learning, remembering, and thinking.
3. Join or form a study group to practise making and answering multiple choice questions of various levels.
   Study old exams. Examine each question to determine:
   – The level or type of thinking required of you
   – The degree of difference between incorrect and correct alternatives.
4. When studying the material consider groups of facts or groups of ideas that are similar in meaning. While learning each group, pay special attention to the differences among the facts and ideas within each group. It may be effective to think of each fact or idea in terms of what each means or includes and what each does not mean or does not include. For a concept, consider what is necessary or sufficient to include. How do two similar concepts differ? Why is that difference important?

Writing multiple choice exams
1. Do the multiple choice items first if your exam has types of questions other than multiple choice. Just reading the stems and alternatives acts as a warm-up to the material. (The stem is the question and the alternatives are the choices). Also, the ideas embedded in these multiple choice questions will fuel your thinking for doing the other parts of the exam.
2. Read the directions carefully. The directions usually indicate that some alternatives may be partly correct or correct statements in themselves, but not when joined to the stem. The directions may say: “choose the most correct answer” or “mark the one best answer.” Sometimes you may be asked to “mark all correct answers.”
3. Often you are required to answer up to 70 multiple choice questions in an hour or less. (Some have 200 questions to answer in 3 hours). This means you may have less than a minute, on average, to spend on each question. Some questions, of course, will take you only a few seconds, while others will require more time for thought especially in numerical based physics MCQ’s. Plan to progress through the exam in three ways:
   – Read every question carefully but quickly, answering only those of which you are 100% certain. Put a “?” on those that need more thought.
Then, examine/study the questions not yet answered. Answer those you are reasonably sure of without pondering too long on each. Erase the “?”

Finally, study read the remaining unanswered questions. If you cannot come to a decision by reasoning or if you run out of time, guess. Erase the “?” Note that some examinations penalize “guessing” by subtracting points for incorrect answers. If there is no penalty, then a guess is better than a blank.

4. **Use the process of elimination procedure.** Eliminate the obviously incorrect alternatives.

5. **Read all of the stem and every alternative.**
   – Read the stem with each alternative to take advantage of the correct sound or flow that the correct answer often produces. Also, you can eliminate any alternatives that do not agree grammatically with the stem.
   – Some students find it effective to read the stem and anticipate the correct alternative before actually looking at the alternatives. Research shows that one is three students scores better with this strategy alone!

6. Consider “all of the above” and “none of the above.” Examine the “above” alternatives to see if all of them or none of them apply totally. If even one does not apply totally, do not consider “all of the above” or “none of the above” as the correct answer. Make sure that a statement applies to the question since it can be true, but not be relevant to the question at hand!

7. **Note negatives.** If a negative such as “none”, “not”, “never”, or “neither” occurs in the stem, know that the correct alternative must be a fact or absolute and that the other alternatives could be true statements, but not the correct answer.

8. **Note superlatives.** Words such as “every”, “all”, “none”, “always”, and “only” are superlatives that indicate the correct answer must be an undisputed fact.

9. **Note qualifying words.** “Usually”, “often”, “generally”, “may”, and “seldom” are qualifiers that could indicate a true statement.

10. **Changing Answers.** Research has shown that changing answers on a multiple choice or true-false exam is neither good nor bad: if you have a good reason for changing your answer, change it. The origin of the myth that people always change from “right” to “wrong” is that those (i.e. the wrong ones) are the only ones you will see when you review your exam – you won’t notice the ones you changed from “wrong” to “right.”

**Following-up after your exam**

*Study your marked and returned exam in order to learn from your successes and mistakes, and to improve your performance in the next PMT. This will pay dividends in future PMT’s. Also some of the questions asked in the previous exams can be asked again in the similar or slightly modified form.*

1. Examine each question you answered correctly. Remember how you knew that the information was important when you studied. How did you study?
2. Examine each question you did incorrectly in order to understand the distinction between the correct alternative and the incorrect alternatives. Ask yourself why the correct answer is correct and why the other alternatives are incorrect.

**DO’S FOR ANSWERING MULTIPLE CHOICE QUESTIONS**

1. **If the question is “conceptual”,** i.e., if the answer it seeks is a statement, begin by covering the alternatives with a ruler or piece of paper. Then, carefully read and understand
the stem of the question before looking at the alternatives. Circle or underline key words in the stem, paying special attention to qualifying words such as “always,” “major,” “increase,” etc.

2. Use your knowledge of headings to think about where in your text, lecture notes, lab, etc. that question is drawn from. Recall a few salient points about the information. If necessary, jot down any relevant facts you need to process the alternatives. This does not have to take much time but this recall is an essential step!

3. Predict an answer, if possible.

4. Uncover all of the alternatives and check the format of the question. Is only one of the alternatives correct, or can several or all of the alternatives be correct?

5. Read each alternative carefully for understanding - NOT JUST FOR RECOGNITION. Again, pay careful attention to qualifying words. Keeping the stem of the question in mind, respond to each alternative with a yes, no, or maybe/not sure.

6. If you know the answer, carefully mark the correct answer on your answer sheet.

7. If you do not know the answer, re-check the stem of the question. Narrow your choices, by eliminating any alternative that you know is incorrect. If two options still look equally appealing, compare each to the stem of the question, making sure that the one you eventually choose answers what is asked. If you are still not sure, make an educated guess (if there is no penalty for wrong answers).

8. If you were unable to make a choice and need to spend more time with the question, or you answered the question but are not at all sure that you made the correct choice, put a big question mark beside that question, and move on to the next. Avoid getting bogged down on one question part of the way through the exam. It is much better to move on and finish all of those questions that you can answer and then to come back later to process the problematic questions.

9. If necessary, when looking over the questions again, change an answer if you can logically justify the change.

**If the question is a problem that requires calculations**

1. Think about what procedure you need to follow to produce a solution. At this point, with some types of questions, it might be possible to make a rough estimate of the scale of possible answer you are seeking.

2. Solve the problem. Be tidy with your calculations; many errors are made through untidy writing.

3. Compare your answer to the options given. If you are satisfied, fill in the answer on the answer sheet.

4. If the answer that you have calculated, is not one of the given options, check your procedure again, making any necessary changes, and recalculate your answer.

5. If you still do not arrive at one of the given options, put a big question mark by that question, and go on to the next. When you get to the end of the exam, go back to any questions that you did not answer the first time through.

**DON’TS FOR ANSWERING MULTIPLE CHOICE QUESTIONS**

1. Don’t select an alternative just because you remember learning the information in the course; it may be a “true” statement in its own right, but you have to make sure that it is the “correct” answer to the question.
2. Don’t pick an answer just because it seems to make sense. You are answering from your knowledge of the course content, not just from your general knowledge and logic.
3. Don’t dismiss an alternative because it seems too obvious and simple an answer. If you are well prepared for the exam, some of the questions will appear very straightforward to you.
4. Don’t be wowed by fancy terms in the question, i.e., don’t say to yourself, “That sounds impressive, so it must be the right answer!”
5. Don’t pick “c” every time you are unsure of the answer. You could end up picking “c” far too many times.
6. Don’t pick your answer based on a pattern of responses, i.e., don’t say to yourself, “This can’t be another “b” answer as we have just had three in a row.”