

QUALIFIED MEDICAL LABORATORY TECHNICIAN (QMLT)



A Guide to Study

Prepared by the NZIMLS

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Welcome

Different people learn and study in different ways and in this 'Guide' it is not intended to cover all the various methods of learning and theories of education. The idea is to provide a guide about how to manage time and to develop some skills before the QMLT examination. Suggestions on to how to develop examination technique and how to approach an essay question will be covered.

The QMLT Examination and the NZIMLS

To take the discipline based QMLT examination a person must be a member of the NZIMLS and continue to be a member to attain the qualification. The qualification is in three parts: the discipline-based examination; the successful completion of the discipline-based Log Book, which must be signed off by a senior Medical Laboratory Scientist; and completing the required number of supervised hours in the laboratory. On the NZIMLS web-site all the discipline-based syllabi can be located, along with the Rules and Regulations and associated information relating to the QMLT qualification (www.nzimls.org.nz).

Developing a Skill Set

The use of the word 'skill' has a number of different interpretations, which include personal transferable skills, key skills, core skills and 'competencies'. In Pathology these all interplay in normal work laboratory work. A 'skill set' is developed over time and is much more than simply wrote learning or waiting to be given direction. A general overview of skill sets is given below.

Skill type or category	Examples of skills and competencies
Generic skills	<ul style="list-style-type: none">• An appreciation for the complexity of the interaction between medicine and laboratory procedures and results.• Develop a wider understanding of the discipline area worked in.• Ability to communicate in a clear and accurate manner.• Ability to set personal tasks and goals, solve problems and think independently.
Intellectual skills	<ul style="list-style-type: none">• Recognising and applying concepts and principles.• Analysing and summarising information correctly.• Recognising and understanding moral, ethical and procedural issues.
Work and observational skills	<ul style="list-style-type: none">• Carry_out discipline related techniques and understand the principles that underlie them.• Work in the laboratory safely and responsibly with consideration to ethical aspects of the work.• Obtain, record and collate laboratory results with accuracy and responsibility.• Understand lines of responsibility in the work place.• Have a knowledge of general laboratory procedures including safety and appropriate legislation.
Numeracy, communication and IT skills	<ul style="list-style-type: none">• Understand and use data in different forms e.g. numerical and graphical.• Communicate reliably in verbal, written and visual forms.• Solve problems with calculators and computers including the use of spread sheets.• Use of computers to communicate results or test outcomes.• Understand the concepts and principles of quality control systems relevant to the discipline.
Interpersonal and teamwork skills	<ul style="list-style-type: none">• Work with a team or as an individual as appropriate.• Recognise and respect the views of others.• Appreciate the interdisciplinary nature of Pathology.

Self-management and professional development skills

- Work independently demonstrating time management and organisational skills.
- Develop an ongoing interest in both the specialist discipline and Pathology.
- Develop an effective and adaptable approach to work and study.
- Demonstrate ongoing professional development. These inter-related skills and attributes and are what a person should be expected to perform in a competent manner in order to achieve goals along a spectrum of achievements.

Time Management

This can be considered as a system for controlling and using time as efficiently and as effectively as possible. The concept applies to both working and personal time. Overall, good time management should provide a number of advantages such as:

- Improved feeling of control over all activities.
- Avoidance of stress.
- Improved performance.
- More time to think clearly.

Time management is essential when studying for examinations. There should be a balance between what is done at work and what is required by the discipline-based syllabus. The knowledge and skills required for the discipline-based examinations are clearly described in the respective discipline-based syllabus. This should be read carefully and is the best possible way to manage work time to gain knowledge and skills to pass the examination. If possible, time management of day-to-day work and time for training should be discussed so that the appropriate organisation of tasks can be agreed.

Taking Notes

This is a good technique for learning and revision and, depending on the learning situation, a good plan is to always give each lecture or block of information a title and a date. This helps when notes are referred back to. There are no set rules for taking notes other than making legible sense. If they are from lectures, never try to write word for word. Instead, try and develop the technique of identifying the key points or issues and summarise the information using the lecturer's sequence of the lecture. If points are emphasised, underline them or make a note that it seemed to be important and check later.

If lectures or seminars are delivered using Power Point the lecturer may give a hand-out of the slides used. Remember that this is never the complete lecture and there will be additional information given verbally. Most good lecturers will use Power Point to act as mental bullet points. As they will fill these in during the lecture, taking notes next to the slide handout is important.

Another technique is to identify the key points of a lecture or presentation then write them later as full text. This is a very good learning technique and encourages checking of the information.

If a decision is made to try and scan textbooks or handouts for relevant content or topic areas, some simple rules are:

- decide on key words relevant to the search.
- check that the subject in a book or handout fits with the key words.
- check the contents pages and chapter headings if the key words fit
- check the index if it is present.
- if using journals, most journals have a key word search function.

Using a key word approach avoids distraction and will save time. If using a document, quickly read through it and mark the selected key words. If none are found then it is not essential for the study.

KEY POINT: Finding information is not the same as understanding or learning it.

Revising

The examination is well established therefore the style and question type will have very little variation other than different questions each year. The date is set well in advance of the examinations and notification of the examinations is well publicised within the profession.

Key points that will help revision:

- Be familiar with the format and duration of the examination.
- Understand the types and styles of the questions.
- Identify whether any section or specific questions are compulsory.

Revision Process

Do not start revising the night before the examinations. Start early and have a revision plan.

- Prepare a revision timetable that identifies topics or principles that should be covered.
- Check that the learning objectives or outcomes are relevant for the discipline.
- Obtain some past examination papers to give an idea of the type of questions and structure required.
- Try and avoid last minute panic.

When using previous examination papers as a resource for revision:

- Analyse the design and style of the examination e.g. how are the marks allocated and are there any compulsory questions?
- Examine the style of the questions e.g. are any linked or are they all stand-alone; consistency of style over two or more examination periods - has the same style of question been asked in different ways?
- Practice answering questions from previous examination papers. Time the period it has taken to answer the questions. Try answering a whole previous examination paper within the allocated time frame. If a group in the same laboratory is taking the same examination, compare answers and seek help or have someone mark the questions and comment. Allow time for people to respond.
- If there are long answer (essay style) questions, learn how to write answer plans to help organise thoughts.
- If there are calculation questions, practice these and have them checked for correct answers and workings.
- Practice using spider maps or diagrams to memorise or put complex information into simpler forms.
- Understand the language used in the examination papers. If there is a problem understanding a term or expression, have it explained.

Examinations

Always arrive at the examination venue with plenty of time in-hand.

Reading the Examination Paper

- Read the instructions first.
- How many questions are set?
- Do all the questions need to be answered?
- Is the paper divided into sections?
- Are any of the questions compulsory or is there a compulsory section?
- Are all the questions carrying equal marks?

Answering the Questions

- If there is a choice of questions, make a choice decision early
- If there is a difficult question, allocate some additional time to it
- Do not spend too long on a single question
- If the questions are answered out of sequence, use the examination paper to mark the answering sequence. This avoids answering the same question twice.
- If abbreviations are used in the answers, explain them first and that they are standard
- Do not include irrelevant facts even though they have been learned for the examination
- **Important**- never leave the examination room before the time is completed and ignore those who do
- Never use white-out on an examination question. A single line through is sufficient.

Revising Answers

If there is time, go back and review the answers. Things to consider are:

- Try and answer questions that were not answered. There is no negative marking so it is worth a try.
- Errors of fact
- Missing information
- Grammatical and spelling errors
- Errors in calculations
- Name or ID number is on the answer book and any other answer sheets e.g. graph paper if required.

Writing an Essay in an Examination

The function of an essay is to find out how much a person knows and understands about a topic and to determine how well that knowledge can be expressed. With a normal essay (not in an examination) it would be possible to check information and take some time writing and checking the essay. The examination essay is total recall of facts plus the depth of knowledge and comprehension of a topic.

Before writing, read the question and think about what is being asked. Are there any clues or indications for this answer? Make a plan for the essay by quickly noting in the answer book any key factors or information relevant to the question. These need not be in any order. When that is done (a few minutes), re-order them so that they have a natural flow. There are three basic sections to the essay:

- Introduction. Provides a brief background to the topic. Do not re-write the question.
- Middle piece. This is where the main points of the essay are written in a logical order from the plan and may be in paragraphs
- Conclusion. This can be short and should draw together the key points in relation to the original question in summary.
- There are no rules about length of essays in examinations but bullet points do not form an essay
- It is important that when the draft plan is finished, cross it out with a single line. That way the examiner knows it is not the answer to the question.

Reasons for Poor Examination Essays

- Not answering the question that has been set, but providing other information.
- Running out of time – this is where practice before the examination is helpful.
- Only answering part of the question.
- Failing to use factual information to support the answer.
- Incomplete knowledge i.e. lack of knowledge on the topic.

- Waffle.
- Illegible hand writing.
- Poor English.
- Poor recall of factual information.
- Failing to correct obvious mistakes. Re-reading before the end of the examination helps overcome this problem.
- Lack of practice at writing examination question essays.