

Practical exam

Legal Metrology Practical exam and Version 4 of Legal Metrology Portfolio

Legal Metrology Practical exam

As of November 2015 the 2 hour Practical examination will have two defined areas of examination. One hour of the Practical exam will be a practical application of equipment and testing. The remaining hour will be an examination which requires you to implement/review the Measuring Instrument Directive (MID) in relation to the questions you are presented with on your table.

You will be presented with a full set of measurement results (where the measurements have essentially been done for you) and you will be asked to analyse and interpret and make calculations and recommendations based on these results.

NMRO have introduced these types of questions into the practical exam to allow us to examine on a broader range of legislation where equipment is otherwise too large or unavailable to bring into the examination rooms.

At that end of this document you will find a sample question that outlines how these questions will be presented at the exams.

The Practical examination will remain a two hour exam with a 15 minute break in between.

Below are examples of areas you may be examined on:

- Any of the MID instruments
- Control over goods in OIML and WELMEC documents
- Inspector's standards or equipment
- NAWI
- Packaged Goods Regulations

Linked with the introduction of the MID examination, the Legal Metrology portfolio has also been reviewed and the list of equipment has been updated to ensure candidates have gained some experience which will support them when taking their practical examinations.

CTSI recognise that candidates will already be completing Version 3 of the Legal Metrology Portfolio and will be taking the practical and oral exams in November 2015. On discussion with all the regional External Verifiers, candidates can continue to complete Version 3 and submit this portfolio this year (2015). A supporting document will be provided in relation to the additional equipment that has been added to Version 4 portfolio to ensure that candidates are not disadvantaged.

Important: You can be examined on any piece of equipment listed in the Version 4 portfolio in the November 2015 Legal Metrology practical exams.

CTSI do not expect candidates completing Version 3 of the portfolio to complete the additional equipment as part of the evidence within their portfolio submission, but you will need to be aware that these new pieces of equipment may come up in your practical exam.

If you have not yet started your Legal Metrology portfolio and you are intending to take practical and oral exams in 2015 you are expected to complete Version 4.

Sample Legal Metrology Practical Question

You are required to conduct a verification of an automatic catchweigher covered by the Measuring Instruments Directive. The instrument has the following markings (Obviously in focus for exam! And without stickers equal or otherwise).



- (a) describe the meaning of the inscriptions on the instrument and whether it is complete (some details to be missing or wrong)
- (b) what paperwork should be present to undertake the verification?
- (c) What tests need to be conducted before the notified body number can be applied?



- (d) What is the purpose of the sticker in the above photograph?

Your assistant has tested the instrument and recorded the following results (assuming Maximum Capacity 6 kg. Division 2 g).

Weight from Catchweigher (g)	Weight from Control Instrument (g)	Error of Weighing (g)	Maximum permissible error (g)
306	305.4		
320	319		
350	350.6		
302	302		
334	334.4		
300	299.5		
298	288.7		
280	299		
356	356.2		
306	305.1		
310	312.5		
306	307.7		
320	318.9		
316	315.7		
330	328.4		
306	304.6		
290	292.2		
320	318.3		
330	329.1		

- (e) Has the instrument passed accuracy testing at this load?
- (f) When would it be sufficient to only do one test load?
- (g) What paperwork should be issued to the submitter upon completion of your testing?
- (h) What stickers (if any) are you going to apply to the instrument?

Pool of Practical Examination Questions

The practical elements within the examination will be based upon the 11 sets of implementing Regulations for the Measuring Instruments Directive, The Non-automatic Weighing Instruments Directive implementing regulations, controls over Packaged Goods whether mass or volume products and OIML and WELMEC documents on how goods / properties are measured. Candidates should be aware that this expands the pool of possible questions.

Legal Metrology Portfolio of Evidence Version 4

List of *extra equipment* from Version 4 Legal Metrology portfolio

- Taximeters
- 2D or 3D dimensional measures
- Medical weighing environment
- CLASS I NAWI
- MCB