



IECEX OD 506

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IECEX OPERATIONAL DOCUMENT

IEC System for Certification to Standards relating to Equipment for use
in Explosive Atmospheres (IECEX System)

IECEX Scheme for Certification of Personnel Competence for Explosive
Atmospheres

Guidance on the use of the IECEx Certificates of Personnel Competence
Scheme's Assessment Question Bank by ExCBs



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

IECEX Operational Document 506

IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres

Guidance on the use of the IECEX Certificates of Personnel Competence Scheme's Assessment Question Bank by IECEX Certification Bodies

This document is supplementary to the IECEX Rules, other IECEX Operational Documents and procedures operated by IECEX Certification Bodies (ExCBs), approved by the IECEX Management Committee to issue IECEX Certificates of Personnel Competence (CoPCs).

The purpose of this Operational Document is to ensure that each ExCB, accepted by the ExMC for the purposes of issuing IECEX CoPCs, assesses certification candidates in a consistent manner.

This Operational Document, OD 506, provides guidance on the use and maintenance of the Question Bank provided to accepted IECEX Certification Bodies (ExCBs) participating in IECEX Scheme for Certification of Personnel Competence for Explosive Atmospheres to assist in the preparation for assessment activities associated with the issue of the IECEX Certificates of Personnel Competence.

This Operational Document is intended to support the implementation of IECEX OD 503 and IECEX OD 504 and should be read in conjunction with the requirements defined in these documents.

Document History

Date	Summary
September 2014	Original issue (Edition 1.0)
June 2018	Update published to reflect change of format of Excel spreadsheets used to publish the Question Bank

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Guidance on the use of the IECEx Certificates of Personnel Competence Scheme's Assessment Question Bank by IECEx Certification Bodies

1 Scope

This Operational Document provides guidance on the use and maintenance of the IECEx Question Bank provided to accepted IECEx Certification Bodies (ExCBs) participating in IECEx Scheme for Certification of Personnel Competence for Explosive Atmospheres to assist in the preparation for assessment activities associated with the issue of the IECEx Certificates of Personnel Competence to personnel involved in activities such as but not limited to:

- of equipment in explosive atmospheres
- overhaul and repair of explosion-protected equipment
- testing electrical installations in or associated with explosive atmospheres
- performing visual and close inspection of electrical installations in or associated with explosive atmospheres
- performing detailed inspection of electrical installations in or associated with explosive atmospheres
- designing electrical installations in or associated with explosive atmospheres
- performing audit inspection of electrical installations in or associated with explosive atmospheres

This Operational Document is intended to support the implementation of IECEx OD 503 and IECEx OD 504 and should be read in conjunction with the requirements defined in these documents.

2 Document Control of the Question Bank

The IECEx Certificates of Personnel Competence Scheme's Assessment Question Bank is provided to accepted ExCBs for this IECEx Scheme (05) in two separate Microsoft Excel files containing:

1. Selected Response type questions with multiple answer options and the most correct answer option identified, and
2. Constructed Response type questions (and model / acceptable answers) requiring a short written response model answer

The questions and answers included in the Question Bank are a combination of those provided by accepted ExCBs as a condition of their acceptance into the IECEx 05 Scheme – the source of questions and answers are not identified in the Question Bank.

As the contributions of the ExCBs represent a valuable asset of commercial sensitivity it is essential that the security of the Question Bank is maintained - ExCBs are required to establish internal procedures to assure this. These procedures must ensure that only questions and not the associated answers are ever provided to certification candidates and parties other than suitably authorised staff of the ExCB.

Similarly, it is essential that ExCBs using the Question Bank operate consistently with all other ExCBs participating in the Scheme – for this reason ExCBs are required to establish internal procedures for ensuring that (i) only the latest version of the Question Bank is used to develop questions for the assessment of certification candidates and (ii) that as new and existing ExCBs edit or add questions and answers to the Bank the latest version as maintained and circulated by the IECEx Secretariat is implemented and maintained.

New issues of the the Question Bank will be circulated by the IECEx Secretariat as regularly as necessary to reflect additions or changes to content. The method of circulation will be via an email to each participating ExCBs nominated contact person and this email will include a link to a database from which the new issue can be downloaded. The link will be maintained for a maximum of one month.

3 Use of the Question Bank

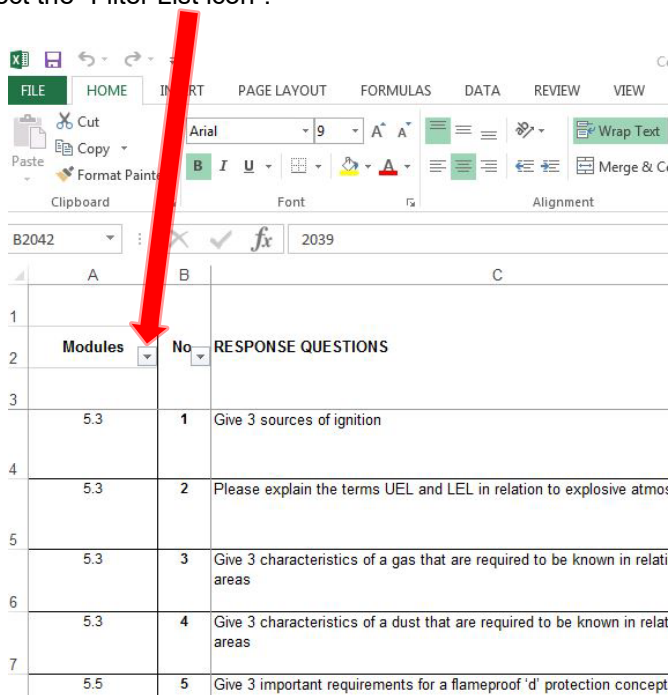
According to the requirements of IECEx OD 503, Clauses 4.3.1 and 4.3.2 when preparing to assess candidates for certification ExCBs are required to select sufficient (refer Table 3 in IECEx OD 503 for details of minimum numbers of questions) knowledge examination questions from the IECEx Certification of Personnel Competence Question Bank relevant to the Unit(s) of Competence being assessed.

3.1 Sorting by Competence Unit Modules

When preparing for an assessment for a particular Competence Unit or set of Competence Units only those questions relevant to that Unit(s) being assessed need to be considered – to assist in this the Question Bank Excel files incorporate a Sorting/ Filtering tool that is provided to assist in displaying only the questions relevant to the Unit(s) of interest. Once sorted the ExCB can select at random the number and type of questions required by IECEx OD503 from the displayed list.

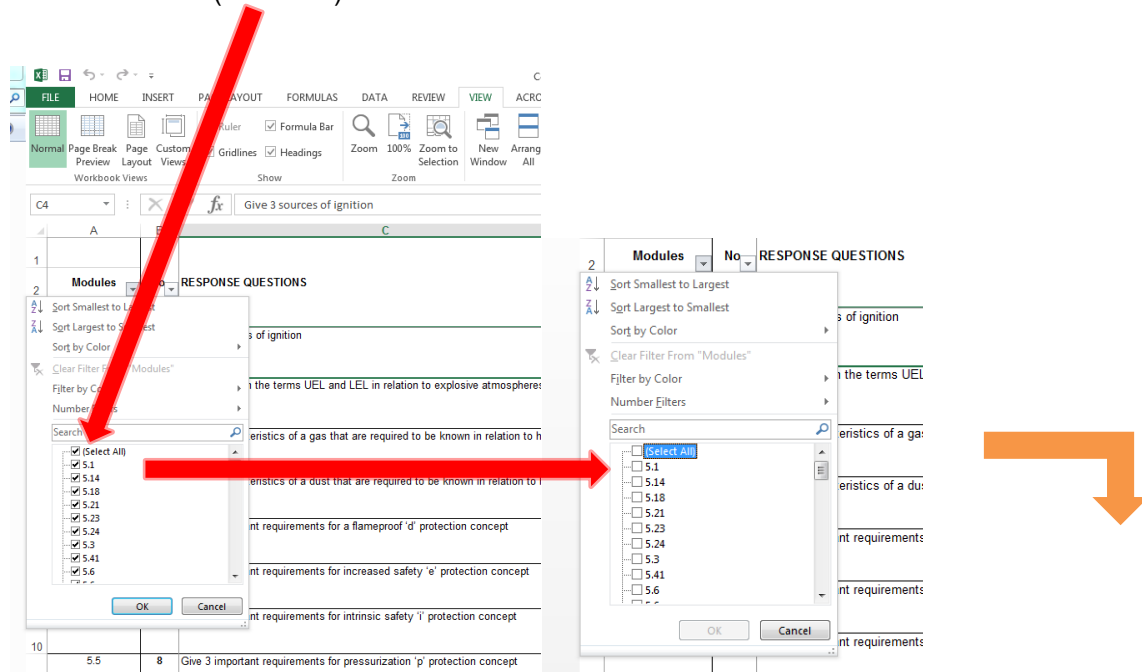
An example of the use of the sorting / filtering tool for specific Modules comprising a Unit of Competence as outlined in Section 6 of IECEx OD 504 is shown as follows:

1. to isolate questions for assessment against Module 5.3 in accordance with Table 3 of IECEx OD 503 you will need to display all the Constructed Response type questions related to Module 5.3. To do this you must first open the Excel file of Constructed Response Questions – the file name of the master file distributed by the IECEx Secretariat = “CoPC Question Bank – Constructed Response_Issue_XX, MmmYYYY.xls” then focus on the Modules column and select the “Filter List icon”:

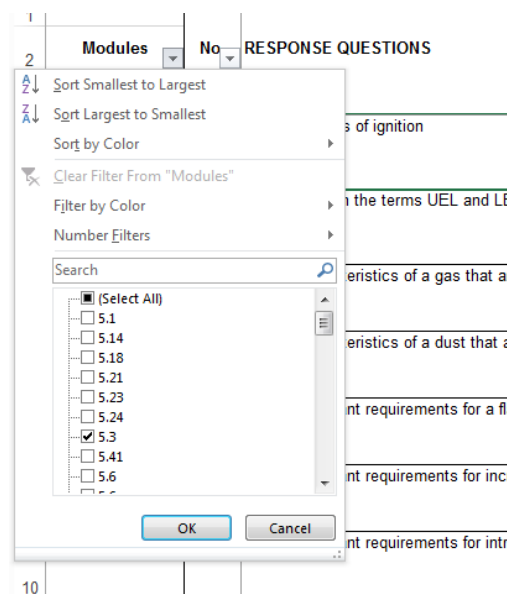


Modules	No	RESPONSE QUESTIONS
5.3	1	Give 3 sources of ignition
5.3	2	Please explain the terms UEL and LEL in relation to explosive atmospheres
5.3	3	Give 3 characteristics of a gas that are required to be known in relative humidity areas
5.3	4	Give 3 characteristics of a dust that are required to be known in relative humidity areas
5.5	5	Give 3 important requirements for a flameproof 'd' protection concept

- then un-tick the '(Select All)' box so that all entries below it are unselected



- scroll through the list of module numbers and tick ALL entries in the list that include the number "5.3" (note that some questions are relevant to more than one Module and therefore some have multiple Modules mentioned in the Module column)



- To finish the filter click 'OK' – this step will initiate the display of a filtered list of the questions that are relevant to the Module 5.3
- To prepare an assessment paper for the Constructed Response Questions for Module 5.3, select all rows in the filtered list, copy this selection and then paste it into a new Excel spreadsheet file (noting that the alignment of diagrams to their relevant questions may be affected and there may be a need to realign these). If there are more questions than the minimum specified in Table 3 of IECEx OD 503 you will need to randomly choose the number of questions required by Table 3 of IECEx OD 503 from the filtered list.

Repeat the above process for each specific Module required by Section 6 of IECEx OD 504.

OR

Alternatively, it is possible to filter for all Modules required by Section 6 of IECEx OD 504.

6. To cancel the “filtering tool” to enable filtering for other Modules, click the ‘Select All’ option, then repeat the process for a different Module from Step 2 above.
7. The same process applies to the selection of Selected Response Questions where the file name of the master file distributed by the IECEX Secretariat = “*CoPC Question Bank – Selected Response_ Issue_XX, MmmYYYY.xls*”

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