

NATIONAL AEROSPACE COMMITTEE FOR NON-DESTRUCTIVE TESTING

ITALIAN AEROSPACE NON DESTRUCTIVE TESTING BOARD



ITANDTB 07

**NATIONAL AEROSPACE COMMITTEE FOR NON-DESTRUCTIVE
TESTING**

LEVEL 3 EXAMS OPERATING METHODS OF

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STATUS OF REVISIONS

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1. INDEX

1. INDEX	3
2. ACRONYMS	4
3. INTRODUCTION.....	4
4. SCOPE.....	4
5. REFERENCES.....	5
5.1 External Documentation	5
5.2 Internal Documentation	5
5.3 Forms	5
6. GENERAL.....	6
6.1 Requirements	6
6.2 Level 3 Qualification Methods	6
6.3 General Exam	8
6.3.1 Basic General Exam	8
6.3.2 General Method Examination	9
6.4 Wide Scope Specific Exam	9
6.5 Practical Exam at ITANDTB.....	10
6.6 Employer Based Specific Exam	11
6.6.1 Integration Exam	12
6.7 Employer Based Practical Exam for the parties' resolution	12
6.8 Archiving of Examination Documentation	13
6.9 Score	14
6.10 Failure of one or more exams	15
6.11 Repeating one or more exams	15
6.12 Loss of Qualification	15
7. ITANDTB.....	16
7.1 Method Commission.....	16
7.2 Examiner	16
7.3 Operational Flow	16
7.2 Wide Scope Certificate Validity	17
8. CAE.....	18
8.1 Operational Flow	18
8.2 CAE Examiner	18
8.3 Qualification Report.....	18
9. ITANDTB FINAL QUALIFICATION.....	19
10. FIVE-YEAR RENEWAL LEVEL 3.....	20
11. SUMMARY FLOW CHART FOR LEVEL 3.....	21
11.1 First Certification	21
11.2.1 Five-Year Renewal of Certification with Credit System	22
11.2.2 Five-Year Renewal of Certification with Exams	23
Annex A - Questionnaire Requirements	24
Appendix B - Rules of Conduct during Exams with Questionnaires	26

2. ACRONYMS

- i. ITANDTB: National Aerospace Board for Non-Destructive Testing
- ii. ENAC: National Civil Aviation Authority
- iii. CAE: Training and Examination Centre approved by ITANDTB in accordance with Ref 5.2(ii).
- iv. NDT: Non Destructive Testing
- v. DL: Employer
- vi. L3: Level 3
- vii. L3R: Level 3 Responsible
- viii. L3R-DL: Employer Responsible Level 3 or delegated (by the L3R-DL) Level 3.
- ix. Candidate: Person applying for Level 3 qualification of one or more NDT methods
- x. RQ: Qualification Report that the CAE sends to the ITANDTB in accordance with ITANDTB-05
- xi. RQWS: Qualification Report that ITANDTB issues and attaches to the Wide Scope certificate
- xii. Normative Body: the set of Reference Norms/Standards of a Specific Customer (e.g. NTA for LDO, AWPS for LDH, etc.)
- xiii. WP: Written Practice

3. INTRODUCTION

- i. This document establishes the operating methods of the National Aerospace Board for Non-Destructive Testing (ITANDTB) regarding the administration of the Level 3 NDT qualification examinations according to EN4179.
- ii. This document is applicable from **September 1, 2023**.

NOTE: This document is the translation of the ITANDTB 07, in case of inconsistency, the Italian version takes precedence

4. SCOPE

- i. The purpose of this document is to regulate the management of NDT Level 3's qualification exams according to EN4179, dividing the exam into two phases:
 - a. The first, carried out directly by ITANDTB, is valid for the issuing of a Wide Scope Qualification Certificate.
 - b. The second, carried out by the CAE recognized by ITANDTB, is valid for the issuing of the final Qualification Certificate by ITANDTB, and therefore of the Employer Certificate valid for the authorization to operate for it.

5. REFERENCES

The following documents are integral part of this document and at their latest revision.

5.1 External Documentation

- i. EN 4179: Aerospace Series – Personnel Qualification and Approval non-destructive testing officer.
- ii. NAS 410: Certification and Qualification of Non-Destructive Test Personnel.
- iii. ANDTBF/10: General Knowledge of Other Methods as required by EN4179.

5.2 Internal Documentation

- i. ITANDTB 01 ITANDTB documents
- ii. ITANDTB 05 CAE Evaluation and Approval
- iii. ITANDTB 09 Credits System
- iv. ITANDTB 10 Rate table

5.3 Forms

- i. ITANDTB M 003 Exam Request Form

6. GENERAL

- i. The Level 3 exam in one of the methods listed in Table 6.3, administered by the ITANDTB, is divided into two parts:
 - a. The first Wide Scope part carried out at ITANDTB
 - b. The second part of the Employer Based type administered by a CAE

6.1 Requirements

- i. The Candidates for Level 3 certification must have sufficient practical experience to ensure that they are capable of carrying out all the activities for which the certification is sought. The minimum experience requirements for Level 3 are listed in the Table 6.1.

Table 6.1- Minimum Experience Requirements to become Level 3	
Level of Education	Level 2 Experience
Nobody	4 years
Scientific/technical diploma	2 years
Degree (3 years) in scientific subjects and/or engineering	1 year
In any case, refer to the minimum experience requirements for Level 3 in the common methods of EN4179.	

6.2 Level 3 Qualification Methods

- i. The candidate's L3R shall forward to the filled Form (ITANDTB Form M003), to the ITANDTB Administrative Secretariat.
- ii. The Level 3 qualification for each method, in accordance with EN4179, is obtained after passing the following examinations:
 - a. basic general exam
 - b. general examination of method
 - c. specific wide scope exam
 - d. practical exam
 - e. If required, a Specific Supplementary Exam (relating to the specifications used by the Employer)
 - f. If required, a Practical Exam to accept/reject the parts, typically carried out on materials, systems and techniques (the same or similar) used by the Employer.

Note: The a ÷ d Exams are administered by the ITANDTB
The e - f exams are administered by a CAE qualified for the devoted method, it is chosen by the L3R-DL when he fills the application Form (Form ITANDTB M003)

iii. Table 6.2 summarizes the main phases of the examination.

Table 6.2– Level 3 Qualification Exam Mode						
	Activities managed directly by ITANDTB				Activities managed by CAE's	
Examination	Basic	General	Specific “wide scope”	Practical	Additional Specific Exam “employer- based”	Practical exam “employer based” to accept/reject the parts
Mode	Questionnaire	Questionnaire	Questionnaire	Writing a procedure / work instruction	Questionnaire	Inspection of at least 2 parts
Output	RQWS and Intermediate Wide Scope Certificate				RQ	
Final output	Employer Based Certificate					

iv. Table 6.3 lists the exams managed by the ITANDTB

Table 6.3 MethodsMunicipalities
Eddy Currents (ET)
Liquid Penetrants (PT)
Magnetic Particles (MT)
Radiography (RT)
Thermography (TT)
Ultrasound (UT)
Shearography (ST)

v. A candidate cannot administer the examination to himself or to his superior

6.3 General Exam

- i. The general examination for Level 3 qualification is a written, closed-book, multiple-choice exam.
- ii. The exam consists of a “Basic” General Exam and a “Method” General exam. The minimum number of questions for the General exam is shown in Table 6.4.
- iii. No oral translation of written exams is allowed.

Table 6.4 – General Exam Questions from Level 3			
Level	General Basic	General of the Method	Notes
3	80	40	Advisory ITANDTB AV 005

6.3.1 Basic General Exam

- i. The Basic General exam (or simply Basic) is a written, closed-book, multiple-choice questions exam.
- ii. The Basic exam is only required for the achievement of the first Level 3 qualification and remains valid for Level 3 qualifications in other methods; in the event of a change of Employer, it will be the responsibility of the latter to establish whether any integration of this exam should be administered for compliance with EN4179.
- iii. The “Basic” exam is structured as follows:
 - a. At least 60 questions about a general knowledge of other NDT methods: the candidate must choose at least four methods from the list of common methods as indicated in EN4179, excluding the NDT method for which the qualification is requested. For each chosen method, there are 15 questions (level 2 knowledge), in order to cover all the methods used by the Employer. These four methods must include at least one volumetric method (UT or RT). Further, in case of specific request by the L3R-DL, the candidate could choose one or more additional methods.
 - b. 20 questions related to specific aeronautical materials and processes.
- iv. The Basic exam is considered to have been passed successfully with a minimum score of 80% which is not counted in the calculation for the average of the other phases (Ref. Par. 6.9 Score).
- v. In the case of a candidate requesting EN4179 Level 3 exam and already in possession of a Level 3 certificate according to ASNT or ISO9712:
 - a. The Basic General Exam can be performed in a reduced mode:
 - i. 20 Questions Regarding Specific Aeronautical Materials and Processes
 - ii. Additional request for integration, if any, by the L3R-DL about of other methods’ knowledge
 - b. The General Method exam is considered passed.
- vi. The Commission Coordinator is identified as the responsible for ensuring that the applications are in compliance with the requirements of the Syllabuses and EN4179.

6.3.2 General Method Examination

- i. The General Method exam (or simply General) is a written, multiple choice, closed-book questionnaire.
- ii. The General Exam covers all the topics prescribed by the general part of the Syllabus for which the Candidate is applying. Each Method Commission present in the ITANDTB Technical Council draws up the database of closed-book general exam questions according to the guidelines provided in Appendix A.
- iii. The Commission Coordinator is the responsible for ensuring that the applications comply with the requirements of the Syllabuses and EN4179.
- iv. As listed in Table 6.4, the general method examination for Level 3 qualification must contain:
 - 40 questions relating to the theory and principles of the method (Ref. Par. 6.9 Score).
- v. In the case of a candidate requesting the EN4179 Level 3 exam and already in possession of a Level 3 certificate according to ASNT or ISO9712, the EN4179 General Method exam can be omitted if the L3R-DL has foreseen and processed it in its Company Written Practice and if this is explicitly requested via application form, providing the relative documents.

6.4 Wide Scope Specific Exam

- i. The Specific exam for Level 3 qualification, conducted by ITANDTB, will cover a wider range of requirements than those applicable at the Candidate's Employer (wide scope).
- ii. It is a written, multiple choice questions and open-Book questionnaire.
- iii. Each Method Commission present in the ITANDTB Technical Council draws up the database of specific open book wide scope exam questions for that method, which must be formulated according to the guidelines provided in Annex A.
- iv. The Commission Coordinator is the responsible for ensuring that the applications comply with the requirements of the Syllabuses and EN4179.
- v. The minimum number of exam questions is shown in Table 6.5.

Table 6.5 - Level 3 Specific Exam Questions		
Level	Specific	Notes
3	35	Wide-scope

- vi. The reference material for answering the open-book questions (Regulatory Documentation, Acceptance Criteria, tables, formulas, etc.) must be made available for consultation of the candidates according to the guidelines of the Method Commission.
- vii. The specific "wide scope" examination for qualification at Level 3 must be structured as follows (Ref. Par. 6.9 Score):
 - at least 30 questions on the requirements of the Regulations / Standards applicable to the inspection process
 - at least 5 questions relating to the application of the Acceptance Criteria.

6.5 Practical Exam at ITANDTB

- i. The practical exam carried out at ITANDTB aims to verify the Candidate's ability to perform the typical activities and tasks required by his Level 3 qualification.
- ii. The procedure or work instruction must be developed in conjunction with the same session as the general (Basic and Method) and Specific Wide Scope exams.
- iii. During the Practical Exam, the consultation of Standard regulations, process specifications and Acceptance Standards is permitted. The use of training manuals and other teaching materials is not permitted.
- iv. In the practical examination administered directly by ITANDTB, the candidate must demonstrate his/her "practical" competence by preparing a procedure or work instruction appropriate to the employer's requirements for the method being qualified. These requirements must be declared by the L3R-DL by appropriately completing the examination application (Ref. 5.3.i).
- v. The results of the practical exam at ITANDTB must be documented and a checklist must be used to evaluate this Level 3 test.
- vi. The Examination Commission is composed of at least 2 ITANDTB Level 3 examiners (of which at least 1 in attendance) appointed by the Technical Manager ensuring maximum impartiality of appointment; this Commission will evaluate the practical exam from Level 3 following a checklist developed in at least 10 points; each member of the Examination Commission must make an independent evaluation of the tests by filling out and signing a relative copy of the checklist as Evaluator. The final evaluation of the practical exam will be the average without weighting coefficients of the evaluations of the two individual examiners.
- vii. The assignment to be part of these Commissions must be assigned by written communication from the Technical Manager to the interested parties no later than 15 days from the date of the beginning of the exams themselves. The forced absence of the member of the Commission will result in the cancellation of the exam session and the convening of a new session. The composition of the commissions will therefore be known, in addition to the person who made the appointment, only to the members and cannot be disclosed under penalty of cancellation of the exam session by ITANDTB.
- viii. To carry out the practical examination of the control procedure/instruction, the contribution of the ITANDTB supporting Companies is used, which make available for the exclusive use of the Committee itself, CND Samples (physical or documentary), kept at their offices, with relative Technical Characterization Sheets that detail the discontinuities present based on the CND analysis method. The designated Examination Commission will evaluate, based on the requirements indicated in the exam application, which samples are the most suitable for drafting the control procedure/instruction.
- ix. It is not permitted for the samples selected by the Commission to come from the CAE or site where the candidate operates.
- x. The exam samples used must be made available to Candidates only and exclusively during the exam session.
- xi. The candidate does not need to know the sample he will be subjected to for his examination.

- xii. If the exam application includes a party resolution exam, please refer to the Employer Based Practical exam.
- xiii. For the practical exam, the candidate is required to be assessed according to a checklist of at least 10 items, each with a grade ranging from 0 (lack of knowledge) to 10 (excellent assessment).
- xiv. The practical exam is considered passed if the overall grade corresponds to an arithmetic mean of at least 70% (Ref. Par. 6.9 Score).

6.6 Employer Based Specific Exam

- i. This exam will be administered by a CAE following the passing of the exams required at ITANDTB (i.e. evidence of the Wide Scope Qualification Report).
The L3R-DL will be responsible for having the candidate take the supplementary exam on the specific standards according to the requirements of the Employer's Written Practice. This Specific "employer-based" exam will be performed on the specifications/instructions/acceptability standards in use by the Employer as reported in the Written Practice. The Specifications/instructions/acceptability standards on which the exam will be based must be declared in advance by the L3R-DL in the Exam Application Form.
- ii. The L3R-DL, where required by its Written Practice, shall ensure that the CAE Level 3 Examiner is approved by the Client too, to administrate the examinations on the relevant Client specifications relating to the requirements set out in the specifications/instructions/acceptability standards in use by the Employer.
- iii. The L3R-DL may, if required by its Written Practice and always under the aegis of the CAE, approve the exam questionnaires.
- iv. The specific exam is a written exam designed to verify the candidate's knowledge of the bodies of specifications. The questionnaire, formulated in accordance with the applicable Specifications, is open-book in accordance with Annex A.
- v. The exam consists of at least 30 questions, equally distributed across the Customer Set of Specs under examination. Unless otherwise specified by the Employer's Written Practice, there will be at least 5 questions for each Customer Specification Set. In case the Customer Specs Sets are more than 6, the Specific Questionnaire will contains more than 30 questions (e.g. if there are 7 different Customers, The questionnaire will contain at least 35 questions).
Unless otherwise expressly provided in the Customer requirements, questions relating to the evaluation and interpretation of the indications (Acceptance or Rejection Criteria / Questions on Quality Standards) will be at least 20% of each Standards Body.
- vi. Unless otherwise specified in the L3R-DL Written Practice, the specific exam is considered passed in accordance with paragraph 6.9 Scoring.

6.6.1 Integration Exam

- i. If the L3R-DL, in accordance with the Written Practice, during the validity of a Level 3 qualification, intends to request an integration with further bodies of specifications and/or acceptability standards, it must do so through a CAE respecting the same criteria for choosing the examination board required in points 6.6-i and 6.6-ii.
- ii. This supplementary exam must be administered in accordance with the requirements of Written Practice (Ref. Par. 6.9 b. Scoring - Note).
- iii. At the end of the Integrated Exam, the CAE will issue an RQ and send it to the ITANDTB.

6.7 Employer Based Practical Exam for the parties' resolution

- i. This exam will be administered by a CAE following successful completion of the required exams at ITANDTB (i.e. evidence of the Wide Scope Qualification Report) when required by the L3R-DL.
- ii. This exam is equivalent to the Level 2 exam and it will be carried out using materials, techniques and types of equipment equivalent to those used by the Employer or will be carried out directly at the employer's premises with materials and equipment normally used by the candidate.
- iii. The L3R-DL may, if required by the Written Practice and always under the aegis of the CAE, approve the exam samples.
- iv. The candidate must demonstrate his/her competence by inspecting an examination sample for each technique provided for in the company Written Practice for which qualification and approval is requested; in any case, for each method for which he/she is competing, he/she must inspect at least 2 (two) examination samples of different configurations.
- v. When only 1 (one) configuration needs to be inspected at the time of certification, both test specimens may be of the same configuration.
- vi. In addition to the 2 (two) (minimum) test samples with known and documented discontinuities, additional samples may also be included without defects.
- vii. The exam samples, chosen by the examination board, must be made available to the Candidates only and exclusively during the examination session, they must not be known to the candidates.
- viii. The practical examination shall be carried out using test specimens on which the location and severity of discontinuities shall not be apparent to the Candidate prior to inspection. Test specimens shall meet the definition of EN4179 and shall be representative of the products the Candidate will encounter in the performance of his duties. Specimens used in the examination may be physical specimens, if the Candidate will be required to demonstrate the ability to apply the processes as well as interpret the results, or may be images such as x-rays or other inspection results, if the Candidate will be required only to interpret the results without performing the imaging process.
- ix. During the execution of the practical qualification tests, the consultation of Standard regulations, process specifications and Acceptance Standards is permitted. The use of training manuals and other teaching materials is not permitted.

- x. The candidate shall document the results in accordance with the applicable acceptance criteria and shall detect all natural or artificial discontinuities present in the test sample, as indicated in the characterization sheet.
- xi. The practical examination for the part Acceptance must be carried out using preferably the employer's equipment/systems (or equivalent as verified by the L3R-DL).
- xii. Appropriate checklists shall be used to evaluate this competency including skill in the use and standardization of equipment, adequacy of procedural details, accuracy and completeness of interpretation and evaluation of indications.
- xiii. The examining Committee must attend the practical tests and must evaluate them by compiling, for each exam sample, a Check List, containing at least 10 points relating to the inspection process and consistent with the Method and techniques used by the Candidate.
- xiv. Unless otherwise specified in the L3R-DL Written Practice, the specific exam is considered passed in accordance with paragraph 6.9 Scoring.

6.8 Archiving of Examination Documentation

- i. All documentation relating to exams taken at ITANDTB will be archived, in a secure and confidential manner, by the Administrative Manager. In particular, the following evidence must be kept at least:
 - a. Name and Surname of the examined person;
 - b. Level, method and test technique(s) for which the individual was tested;
 - c. Exams and related score;
 - d. In case of credit system renewal (ITANDTB 09), documentation of credit points used for level 3 recertification. Last written and practical examination does not need to be retained;
 - e. Issue date and expiration date of the current qualifications.
 - f. Any certifications obtained according to other certification schemes useful for defining the qualification exams
 - g. Results of the most recent (i.e. current) visual acuity and color perception tests
 - h. Documentation of the level of education achieved to meet the qualification requirements;
 - i. The name and signature of the examining board that administered the exams.
 - j. The name and signature of the Technical Manager and the President who approve the qualification.
- ii. The Documentation of the exams administered by the CAE (Specific Employer Based and Practical Exam for the acceptance of the parties), will be archived in a secure and confidential manner at the CAE. In particular, the following evidence must be kept as a minimum:
 - a. Name and Surname of the examined person;
 - b. Level, method and technique of testing for which the individual is qualified;
 - c. Exams and related score;
 - d. Issue date and expiration date of the current qualifications;

- e. The name and signature of the examining committee that administered the supplementary exams;
 - f. If required, the NDT training carried out at the CAE, the type of training, training dates and course hours;
 - g. The date and corrective action to restore such qualifications must be documented;
 - h. Results of the most recent (i.e. current) visual acuity and color vision tests.
- iii. All documentation, both that archived at ITANDTB and that archived at the CAE, must be retained for a period equal to the entire duration of the qualification and for a further period of at least 5 years following the loss of the qualification.
- iv. All documentation, both that archived at ITANDTB and that archived at the CAE, must be made available for review by Auditors, Authorities and/or Third Party Bodies when necessary.

6.9 Score

- i. In order to successfully pass the exams required for the Level 3 qualification, the candidate must obtain at least the following minimum scores:

a. Exams at ITANDTB:

- 1. General Basic: minimum 80% (does not contribute to the average);
- 2. General Method: minimum 70%;
- 3. Specific “wide scope”: minimum 70%;
- 4. Practical (control procedure/instruction): minimum 70%;
- 5. Arithmetic mean of exams (2, 3, 4): minimum 80%.

Note: In case the General Method exam is omitted (i.e. in the presence of ASNT, ISO 9712 or other NANDTB certificates), the General Method exam is assigned a score of 80%.

b. Exams at CAE:

- 1. Specific “employer-based”: minimum 70%;
- 2. Practical for “employer-based” party resolution: minimum 70%.
- 3. Arithmetic mean of exams (1,2): minimum 80%

Note: In case the Practical exam is omitted, the Specific “employer-based” exam is considered passed with a minimum score of 80%. The Practical exam is considered passed if all natural or artificial discontinuities present in the exam sample have been correctly detected.

6.10 Failure of one or more exams

- i. In the event that one or more exams are not passed, they cannot be repeated in the same session.
- ii. Passed exams remain valid for a period of 12 months from the date of taking them.
- iii. Failure to complete an exam must be documented by both ITANDTB and the CAE, identifying the areas in which the candidate has demonstrated deficiencies and directing further preparation by the candidate.
- iv. If the supplementary exams taken at the CAE are not passed, the examining board must request specific additional documented training and must inform ITANDTB of the failure of the supplementary exams.

6.11 Repeating one or more exams

- i. Candidates who have failed one or more exams may repeat them within a period of 12 months from the date of the first failure.
- ii. Before being re-examined, candidates must demonstrate that they have filled the gaps that caused them to fail the Exam; evidence of this preparation must be sent by the L3R-DL when applying for the Exam.
- iii. The new exam must contain at least 25% of different questions than those presented in the failed exam and, if the practical exam has to be repeated, the exam samples must be different from those used in the failed exam.

6.12 Loss of Qualification

- i. The requirements of EN4179 for expiry, suspension, revocation of a Level 3 qualification apply.

7. ITANDTB

7.1 Method Commission

- i. In accordance with the ITANDTB 02– Constitutive Charter, the Technical Method Commissions are composed by the Level's 3 of the Founding Companies (Prime) and by the Companies and/or CAE's that participate in the activities of the Technical Commissions.

7.2 Examiner

- i. An examiner must be an ITANDTB Level 3, designated by the Technical Manager to administer all or part of the qualification and certification process in the NDT method in which the examiner is certified.

7.3 Operational Flow

- i. The ITANDTB administers the “wide scope” General, Specific and Practical Examinations as indicated in Table 6.2.
- ii. The exam questionnaires are randomly drawn from a database of questions drafted and validated by the respective Methodological Commissions.
- iii. The database of questions is divided by the methodology and it is archived by the Administrative Manager who ensures its confidentiality and integrity.
- iv. Each questionnaire is validated by the Coordinator of the Method Commission and by the Technical Manager.
- v. Questionnaires are provided to candidates only at the time of the examination session.
- vi. The Administrative Officer is the person responsible for supervising/controlling that the written exams are carried out in compliance with the rules set out in Appendix A.
- vii. The Administrative Manager is the person in charge of correcting the written questionnaires as they are multiple choice questions; in case of discrepancies or observations received from the candidate, they will be sent to the Coordinator of the Method Commission for his analysis and evaluation.
- viii. The Technical Manager with the support of the Administrative Manager appoints the Examination Commission, i.e. the Examiners to be involved in the evaluation of the practical examination of the control procedure/instruction.
- ix. The judging commission is composed of at least 2 examiners who will evaluate this exam following a dedicated checklist developed in at least 10 steps; the final evaluation will be the average of the evaluations of the two individual examiners.
- x. Under no circumstances may a candidate administer his/her own exam or be examined by his/her own collaborator or by a Level 3 belonging to the same Company.
- xi. The results of the General, Specific Wide Scope, and Practical Exams are formalized and documented in a clear and exhaustive manner through dedicated Qualification Reports.
- xii. The Administrative Manager collects the evaluations from the written exams (Basic General, Method General and Specific wide scope) and from the ITANDTB Practical exam and compiles the Wide Scope Qualification Report as a summary of the evaluations to arrive, in case of success, at the issue of the Level 3 “wide scope” qualification certificate in the required method.

- xiii. The Level 3 “wide scope” qualification certificate, once signed by the Technical Manager and the President, is sent to the L3R-DL for subsequent actions (as reported in the Level 3 Exam Application).
- xiv. The Wide Scope qualification certificate is only the first step towards the Level 3 qualification in the required method, therefore it is not sufficient to insert the candidate in the Level 3 register in the Method. This qualification must be completed with the Employer Based part administered by a CAE.

7.2 Wide Scope Certificate Validity

- i. The expected Wide Scope is valid for 1 year, a period within which the candidate must complete the qualification path from Level 3 in the required method at a CAE, for the purposes of issuing the ITANDTB Final Qualification.

8. CAE

8.1 Operational Flow

- i. In compliance with the provisions of EN4179 and the company Written Practice and in accordance with what is reported in the Exam Question (ITANDTB M 003), the CAE hired by L3R-DL:
 - a. Notify ITANDTB in writing at least 15 days in advance of the planning of the supplementary exam session(s) for Level 3, to allow for the possible participation of a delegate as supervisor.
 - b. Administer the Employer Based Specific exam as indicated in Table 6.2, to cover the operational peculiarities that the candidate will encounter in carrying out his/her duties (specifications, acceptability standards, product and techniques) in compliance with what is indicated in EN4179 and in the company Written Practice and in coherence with what is reported in the Exam Question.
 - c. Administers, where required by the Employer, the Employer Based Practical Exam of the parties' resolution.
- ii. It is not permitted to use the parties' resolution exam, concurrent with the valid Level 2 qualification, for the new Level 3 qualification.
- iii. Exams can be made available for review upon request.
- iv. The practical exam must be carried out using the employer's equipment/systems or equivalent as assessed by the L3R-DL.

8.2 CAE Examiner

- i. The examiner is an ITANDTB Level 3 in the method in which the candidate competes which is part of the CAE structure.

8.3 Qualification Report

- i. Upon completion of the above supplementary exams (within a maximum period of 15 days), the CAE sends the Qualification Report (RQ) to ITANDTB.
- ii. The RQ must include the method, level, reference specifications, company Written Practice, techniques for which it was examined and the related score.

9. ITANDTB FINAL QUALIFICATION

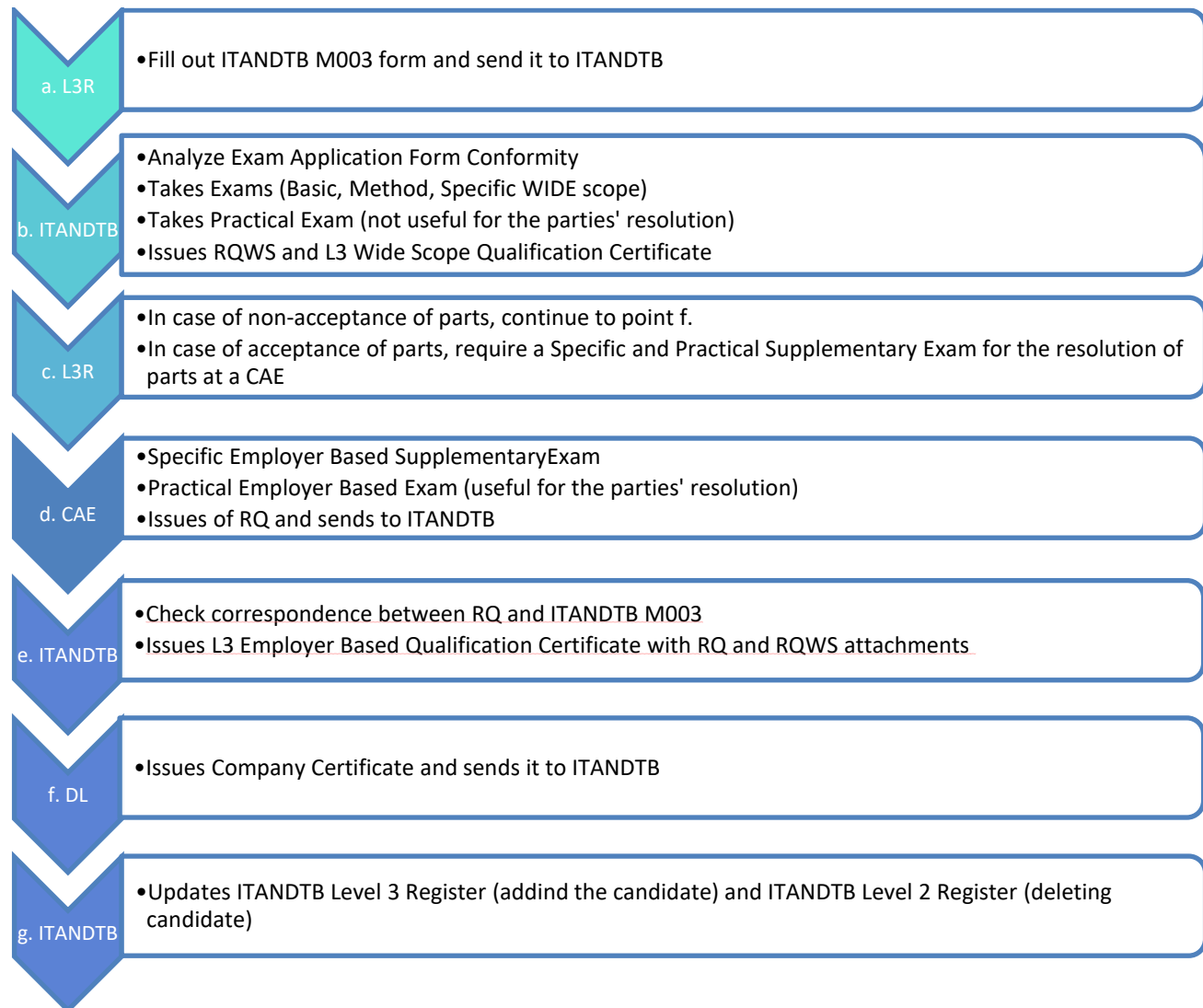
- i. The ITANDTB:
 - a. Receives the Qualification Report from the CAE and verifies its consistency with what is reported in the Level 3 Exam Application.
 - b. Issues the ITANDTB Final Qualification Certificate signed by the Technical Manager and the President of ITANDTB, to the Employer.
 - c. Update Level 2 and 3 albums:
 - i. Adding the new name in the L3 Register in the candidate's chosen method
 - ii. By deleting the same name from the Level 2 Register using the same method.
- ii. The final certificate of the ITANDTB represents the basis for the release of the Certification/Approval by the Employer according to EN4179/NAS410.
- iii. It is the Employer's responsibility to issue Certification/Approval (to the Level 3 candidate) to operate.

10. **FIVE-YEAR RENEWAL LEVEL 3**

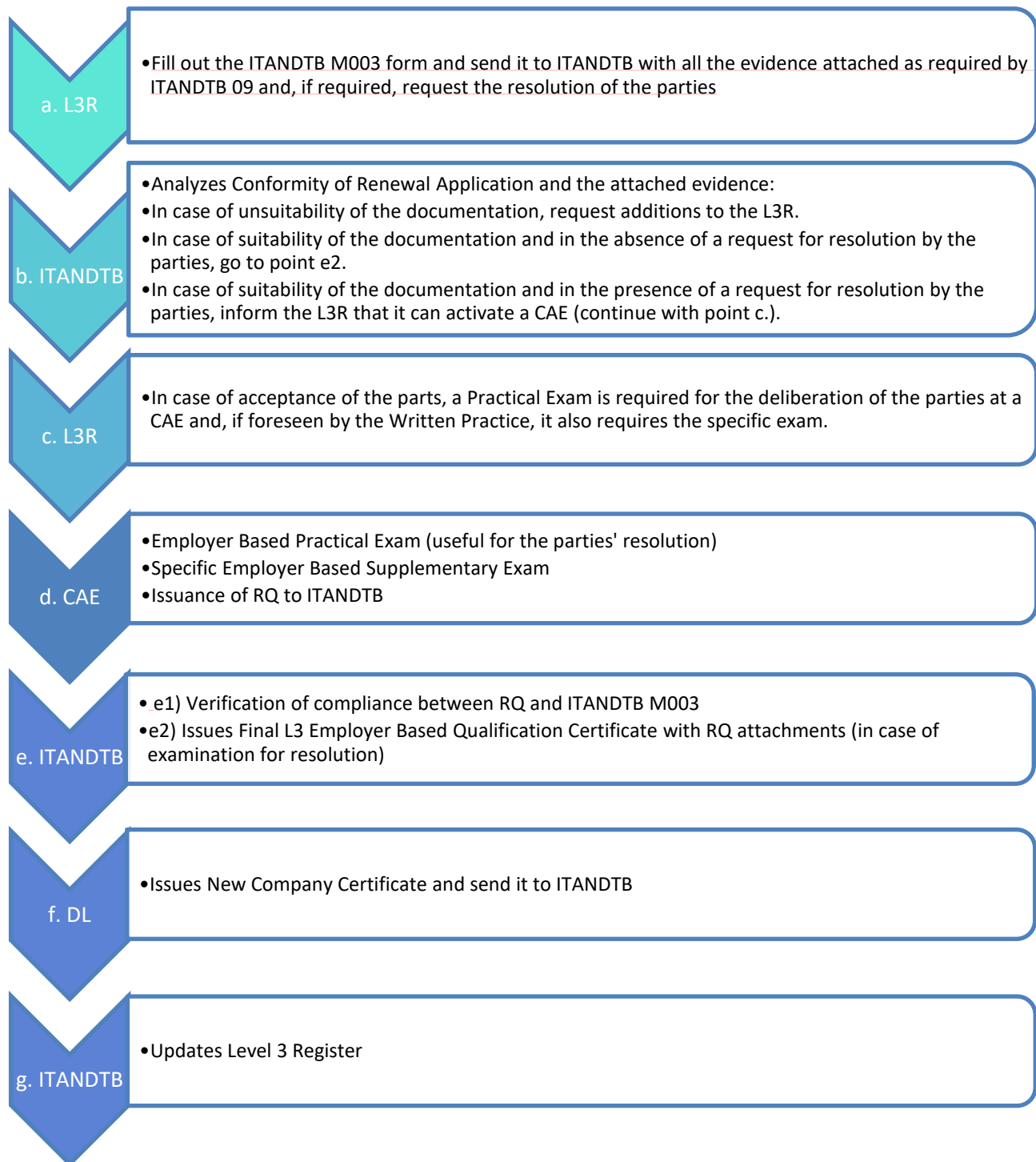
- i. Level 3's must be renewed every five years.
- ii. Renewal occurs either through the methods of the First Qualification (with the exception of the Basic and General exams) or through the credit system in accordance with ITANDTB 09.
- iii. In the case of credit renewal:
 - a. Before the expiration date, the Level 3 L3R (or Level 3 itself) sends ITANDTB, in accordance with ITANDTB 09, the Examination Application Form (ITANDTB M 003), specifying that it is a renewal request and attaching all the required evidence.
 - b. The Request must be received at least 2 months before the expiration date, then the Technical Manager, supported by another Level 3 if necessary, evaluates the evidence provided to support the renewal of credits.
 - c. Following this evaluation, ITANDTB is responsible for providing a written response of acceptance to the renewal application.
 - d. In case of refusal of renewal, ITANDTB must provide details of any deficiencies and/or additions to the Application.
 - e. If the evidence (including any supplements) provided by the candidate does not meet the requirements, he/she will have to take a Level 3 exam as in the case of the First Qualification.
- iv. If a resolution by the parties is required, a CAE will need to be activated to carry out the Employer Based Practical Exam according to the methods set out in the First Qualification.
- v. Optionally, the L3R-DL may request a Specific Employer Based exam (or an integrative exam of a body of specifications/acceptance standards) according to the methods provided for in the First Qualification.
- vi. The final grade of the exam will be that of the practical exam only (or the average of the practical and specific exams according to the methods provided for in the First Qualification).
- vii. In the event that the parties do not wish to have a resolution, following communication in the ITANDTB M 003 Application Form, the renewal and therefore the issuing of the Final Certificate will take place because of the analysis of the attached documentation.
- viii. As in the case of the First Qualification, the final ITANDTB certificate represents the basis for the release of the Certification/Approval by the Employer according to EN4179/NAS410.
- ix. It is the Employer's responsibility to issue the Certification/Approval (at Level 3 subject to renewal) to operate.

11. SUMMARY FLOW CHART FOR LEVEL 3

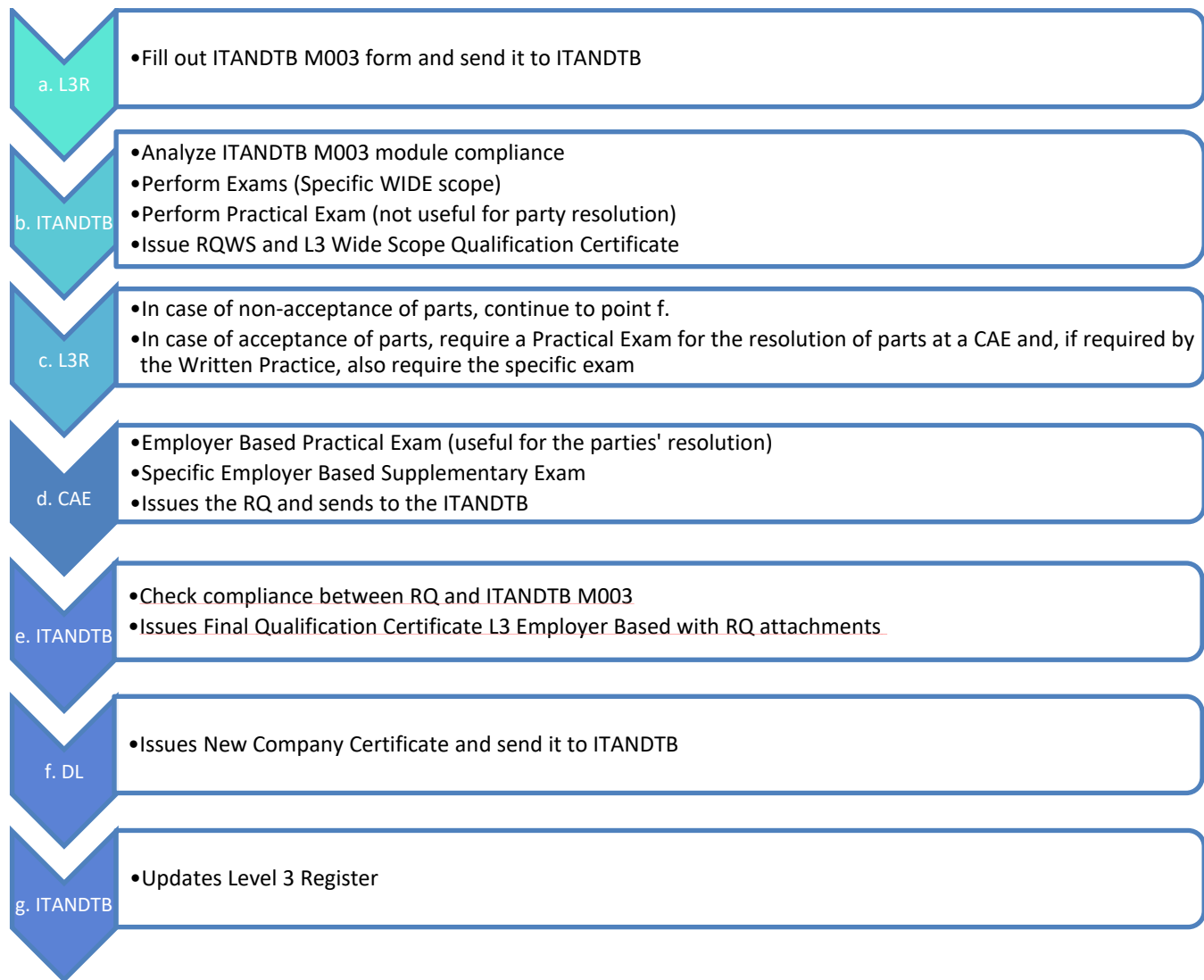
11.1 First Certification



11.2.1 Five-Year Renewal of Certification with Credit System



11.2.2 Five-Year Renewal of Certification with Exams



Annex A - Questionnaire Requirements

- i. Questionnaires administered by ITANDTB must be approved by the Commission Coordinator of the relevant method involved.
- ii. The questionnaires administered by the CAEs must be approved by the CAE L3R and (if required by the Written Practice) by the L3R-DL.
- iii. The wording of questions and answers must satisfy the following rules:
 - a. they must be formulated in such a way as to cover as many topics as possible defined in the applicable Syllabuses and/or Standards.
 - b. Questions and answers should be written in a clear manner, easily understandable by the qualification level involved.
 - c. In the case of open book exams, they must consist of questions that concern the understanding of the information and requirements reported in the documents being examined and not simply the identification of a piece of data within those documents (look-up table like).
 - d. In the case of questionnaires with multiple choice answers, for each question there must be only one correct answer, uniquely identifiable.
 - e. If a question or answer uses graphics or images, these must be appropriately identified and possibly contain only details that are relevant to the question or answer. Such details must be clearly visible and, when identified, allow the question to be answered.
 - f. Each question should not exceed 400 characters (excluding spaces).
 - g. Each questionnaire cannot have the same question twice or more, even if formulated differently.
 - h. The same questionnaire may be used in different examination sessions only if it is verifiable that the candidates do not know or cannot remember the questions reported in the questionnaire itself. In any case, if the exam is repeated by a candidate less than six months later, the questionnaire must contain at least 25% of questions different from those previously proposed.
 - i. The available applications must be targeted at aerospace applications and in sufficient number to ensure compliance with the requirements.
- iv. The questionnaires provided to candidates must be in Italian and translated at least into English.
- v. All questions must be:
 - a. for the general exam with multiple choice questions with at least 4 alternative answers;
 - b. for the specific exam:
 - i. With multiple choice answer with at least 4 alternative answers
 - ii. With True/False, Acceptable/Not Acceptable answer (no more than 25% of questions)
 - iii. With a compilation-type response (no more than 25% of the questions)
 - iv. The combination i + ii + iii is allowed.
- vi. The use of abbreviations and acronyms should generally be avoided (e.g. use “electron beam welding” instead of “EBW”). However, when necessary, they should be used in the internationally recognized form and, if possible, accompanied by an explanatory legend.

In case of doubt, use the extended form (e.g. “12 degree incidence angle” instead of “12° incidence angle”)

- vii. Questions and answers should be formulated as simply as possible.
- viii. The response process should be positive with a choice between four or two possible answers, rather than negative by exclusion.
- ix. In the case of multiple choice questions, the correct answer must be absolutely correct and complete or, without any doubt, the preferable one. Avoid answers that are essentially similar to each other, which therefore make the choice between the two almost a question of mere interpretation. One of the main advantages of a multiple choice test is that it is quick and effective, which cannot be achieved if there are doubts of interpretation on the correct answers.
- x. All proposed answers should be clearly related to the question and similar in vocabulary, grammatical construction, and length. In questions with numeric answers, incorrect answers should be incorrect because they are related to possible calculation errors (such as incorrect variables, altered formulas, incorrect unit conversions, etc.) rather than containing random numbers.
- xi. Calculators are permitted during the exam.
- xii. Questions must always be referred to the exam syllabi, process specifications or documents applicable to the specific part.
- xiii. On average, 2.5/3 minutes should be sufficient to answer a questionnaire question, assuming the Candidate is well prepared.
- xiv. Questions must be indicated by a unique progressive number for the entire exam questionnaire.

Below is a sample question format for a multiple choice questionnaire:

XXXXnn Text of the Request:

- a) Answer 1
- b) Answer 2
- c) Answer 3
- d) Answer 4

Question text:

- a) Answer1
- b) Answer2
- c) Answer3
- d) Answer4

Where:

- XXXX=Method
- nn=progressive number of the application expressed with two digits

Appendix B - Rules of Conduct during Exams with Questionnaires

- i. During the test, only ITANDTB documents authorized for the open book exam are allowed on the table (including blank sheets of paper on which to make calculations or report errors).
- ii. English-Italian technical dictionaries and other tools such as calculators (not from smartphone applications), rulers or erasers can be used,
- iii. During the test, it is not permitted to talk to other candidates or ask the monitors present for clarifications on questions or answers.
- iv. ITANDTB is committed to ensuring that questions or answers do not contain errors; if a candidate believes that there are any, he/she can report it on a separate sheet that he/she will submit with all the other documents at the end of the test.
- v. Once the answer has been selected, the corresponding letter must be written in pen on the table under the corresponding question number.
- vi. There is only one correct answer for each question; multiple answers or no answers will be considered incorrect.
- vii. If the candidate wishes to change the answer, he/she will delete the previous one and replace it with the new choice.
- viii. During the test, no telephone calls or connections with laptops, tablets or smartphones are permitted (all electronic devices must be handed over to the monitor and will be returned only at the end of the test).
- ix. To carry out the test, a period of time is allowed which does not allow for interruptions and, therefore, to take into account the meal, of no more than five hours.
- x. In case of leaving the classroom to go to the toilets, the candidate must hand over all the documents which will then be returned to him upon his return; the absence must not last more than a logical amount of time,
- xi. At the end of the test the candidate must return all the documents received (signing where required),
- xii. Violation of one or more of the above rules may result in the cancellation of the exam.