



Part 147

Aviation

Maintenance schools

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SUBPART A
General

147.1 Introduction:

- (a) To approve the ground training in civil aviation field conducted at any training schools, centers, institutes, and/or department as a sufficient training to apply for issuing a license or adding training specifications, or permanent approval to perform some specific tasks in any civil aviation field. The school conducting this training shall be approved by the ECAA for that purpose.
- (b) This Part prescribes the requirements for issuing aviation maintenance school certificates and general rules for the holders of those certificates and training specifications.
- (c) General:

(1) Aviation Maintenance schools as approved training organization shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training.

(2) Aviation Maintenance schools approved training by ECAA shall be dependent upon the applicant demonstrating compliance with the requirements of this part and the relevant provisions contained in ECAR 19.

Note.— ECAR 19 includes safety management provisions for an approved training organization that is exposed to safety risks related to aircraft operations during the provision of its services. Further guidance is contained in the Safety Management Manual (SMM) (Doc 9859).

(3) Aviation Maintenance schools as approved training shall be conducted within an approved training organization.

Note 1.— Guidance on approval of a training organization can be found in EAC147.

Note 2.— The approved training considered in (iii) above relates primarily to approved training for the issuance of ECAR 65 subpart E . It is not intended to include approved training for the maintenance of competence or for an operational qualification after the initial issuance of rating, as may be required for Air traffic controllers, such as the approved training under ECAR 145 Approved maintenance organizations and repair Stations.

147.3 Certificate required

No person may operate as a certificated aviation maintenance school without, or in violation of, an aviation maintenance school certificate issued under this Part.

147.5 Approval of training schools, departments, centers, institutes or divisions

- (a) Application and issue:

An application for a certificate and training specification, or for an additional training specification, under this part is made on a form and in a manner prescribed by the ECAA, and submitted with the following approval requirements:

- (1) The applicant shall be granted a ministerial agreement to conduct ground training activity for the others in civil aviation field;
- (2) The training organization shall nominate a person responsible for ensuring that it is in compliance with the requirements for an approved organization.
- (3) The applicant shall have a main office in ARE;
- (4) The applicant shall submit an exposition manual for his activities;
- (5) The applicant shall have appropriate classrooms necessary to conduct theoretical training activities;
- (6) The applicant shall have workshops laboratories, testers or appropriate training aids;
- (7) The applicant shall have sufficient approved instructors to conduct the different training activities, each in his specialization, along with a chief instructor;
- (8) The applicant shall present the training curriculums for planned courses for approval;
- (9) The applicant shall have sufficient number of technical supervisors, responsible to supervise the courses;
- (10) The applicant shall establish an internal evaluation program;

- (11) The school shall be equipped with safety and fire fighting devices, emergency equipment, appropriate advisory marks in clear places of the buildings, along with appropriate emergency exits suitable for all abnormal conditions and possess the necessary trained personnel for the fire extinguishing and life saving to fulfill the requirements of industrial safety;
 - (12) The school shall be equipped with necessary rest rooms; and
 - (13) The training organization shall establish a quality assurance system, acceptable to the Licensing Authority granting the approval, which ensures that training and instructional practices comply with all relevant requirements.
 - (14) The applicant has the key personnel approval from ECAA for .
 - Accountable manager.
 - Quality manager .
 - Traninig manager .
 - Examination manager .
 - Safety manger (according to ECAR 19) .
- (b) Approval procedure:
- (1) At least sixty days before conducting any training activities requiring approval, the training department shall submit the following to the ECAA :
 - (i) An application for approval of the department using the appropriate form;
 - (ii) Two copies of the training department internal exposition fulfilling all information requested for approval; and
 - (iii) All necessary official documents for the requested approval.
 - (2) The applicant shall allow ECAA inspectors to survey his capabilities in order to ensure its compliance with the exposition presented, and to the requirements for approval. The applicant will provide access to all facilities for inspection, and will be notified with the ECAA inspectors' recommendations within 2 weeks from the date of achieving inspection.
 - (3) An applicant who meets the requirements of this Part is entitled to an aviation maintenance training certificate and associated training specifications prescribing such approvals and limitations as are necessary in the interests of safety.
- (c) Duration of certificates:
- (1) An aviation Training certificate and training specification are effective for two years unless until it is surrendered, suspended, or revoked; and
 - (2) The holder of a certificate that is surrendered, suspended, or revoked, shall return it to the ECAA.
- (d) Display of certificate
Each holder of an aviation Training certificate and training specifications shall display them at a place in the school that is normally accessible to the public and is not obscured. The certificate must be available for inspection of the ECAA.
- (e) Change of location
The holder of an aviation maintenance school certificate may not make any change in the school's location unless the change is approved in advance. If the holder desires to change the location he shall notify the ECAA, in writing, at least 30 days before the day the change is contemplated. If he changes its location without approval, the certificate is revoked.
- (f) Key Personnel requirements :-
- 1- Accountable Manager :-
 - shall have a complete knowledge of all ATO requirements (establishment and operation.
 - shall have managerial experience and understanding of how to manage ATO .
 - Shall have acquire training courses in ECARs and safety management system as a minimum;
 - 2- Quality manager :
 - shall have successfully achieved the training requirements appropraite for aviation maintenance school scope of work .
 - He shall be trained and qualifed in quality system.
 - He shall have 5 years experience in civil aviation activities including at least 2 years in quality system.

3- Traning manager :

- shall have successfully achieved the training requirements appropriate for aviation maintenance school scope of work .
- He shall be trained and qualified as instructor .
- He shall have 2 years experience in civil aviation activities including at least 1 year as instructor.

4- Examination manager :-

- shall have successfully achieved the training requirements appropriate for aviation maintenance school scope of work .
- He shall be trained and qualified as instructor .
- He shall have 2 years experience in civil aviation activities including at least 1 year as instructor

5- Safety manager (according to ECAR 19)

(g) ECAA Inspection Authority

- (1) Each person holds a certificate under this part (or applied for such certificate) shall grantunrestricted and unlimited access for ECAA inspectors to inspect his personnel, facilities, equipment, documents and records to determine:
 - (i) Eligibility to continue to hold his certificate.
 - (ii) Compliance with this ECAR part
 - (2) Failure to comply with paragraph (a) above shall be a basis to suspend, withdraw or revoke any certificate issued under this part.
- (h) Internal Evaluation Program: Each certificate holder is responsible to:
- (1) Establish and maintain an Internal Evaluation Program (IEP) that is acceptable to the ECAA. The IEP is a systematic self-analysis for evaluating the performance, policies and procedures of all departments within a certificate holder's organization;
 - (2) Make the necessary revisions to the program, and submit it to the ECAA whenever the ECAA finds that the program described in paragraph (a) of this section does not contain adequate procedures and standards;
 - (3) Identify the following personnel in the IEP policy and procedures manual:
 - (i) The Internal Evaluation Program Manager who reports directly to the certificate holder's Chairman or equivalent and shall be accepted by the ECAA; and
 - (ii) The Internal Evaluation technically qualified members that have satisfactorily passed an auditing training acceptable to the ECAA.
 - (4) Submit to the ECAA, at least quarterly audit planning schedule. The ECAA shall have access to all audit reports and may choose to attend the scheduled audits or conduct random audits of any area. Regulatory findings made by the company's IEP audit team shall be submitted under the Voluntary Disclosure Program (EAC 00-1, as amended). Any findings by an ECAA audit team that has not been reported by the company's IEP process shall be processed under standard enforcement; and
 - (5) Guidance material for the IEP program could be found in EAC 002 as amended.
- (i) Advertising:
- (1) A certificated aviation maintenance school may not make any statement relating to itself that is false or is designed to mislead any person considering enrollment therein; and
 - (2) Whenever an aviation maintenance school indicates in advertising that it is a certificated school, it shall clearly distinguish between its approved courses (training specifications) and those that are not approved.

147.7 Training exposition manual

- (a) The exposition shall contain the following details:

- (1) Principal address of the training department in A.R.E and also the address of its branches;
 - (2) Name and legal position of training department and ministerial agreement to allow it to execute ground training activities in civil aviation field;
 - (3) Description of its building and contents as: classrooms, laboratories, workshops, testers, and training aid devices, and its divisions, leisure rooms and libraries if any, attached with it all contracts with other training facilities to complete any training;
 - (4) Demonstrate the organization structure and list of instructors and technical supervisors' names and approved signatures;
 - (5) The training plan, schedules and leisure time of instructors, trainees and training department. Avoiding exceeding standard legal times allowed;
 - (6) General rules of training departments describing admission requirements and continuation in different studies, and also rules of failure and success and attendance limitations and different evaluation processes;
 - (7) Copies of proposed evaluation forms for courses, instructors and training aids etc., to be distributed to trainees, supervisors and inspectors;
 - (8) Procedures and time limitations for keeping records, forms, and exams;
 - (9) Safety procedures provided meeting industrial safety requirements for buildings and activities conducted within them;
 - (10) Forms of certificates or courses results, and training orders;
 - (11) Certificates issued from different authorities if any; and
 - (12) Procedures to ensure that the training and procedures manual is amended as necessary to keep the information contained therein up to date.
The training department shall submit a request for exposition approval, attached with it two copies of its exposition.
- (b) Approval procedure:
- (1) The applicant shall provide all facilities for ECAA inspectors to perform the required inspections;
 - (2) The applicant will be advised with the ECAA recommendations within 2 weeks from achieving inspections; and
 - (3) Upon fulfilling all ECASA recommendations a certificate of approval will be issued, specifying approval limitations and training specifications.

147.9 To maintain Training certificate:

- (a) ECAA will maintain an effective oversight programmer of the approved training organization to ensure continuing compliance with the approval requirements.
- (b) Any major change occurring to the training facility shall be submitted to the ECAA at least 3 weeks before any changes is made on a form and in a manner prescribed by the ECAA.
- (c) The ECAA may suspend the approval whenever any deviation from requirements occurs (approval could be suspended either partially to some training specifications or completely). And if the requirements are not fulfilled within the time granted, it may be revoked completely or partially. Any changes in the organization structure or address of the training department or its rules or certificates, shall be notified to the ECAA within 3 weeks, using the appropriate form issued by the ECAA for that purpose and provide all facilities to ECAA inspectors to review those changes in order to approve them.

SUBPART B

Courses (Training Specifications) and Curriculum Requirements

147.11 Approval of training curriculums

A thorough identification of the knowledge level is required, in order to qualify certain specialists, to allow them to apply for the Egyptian civil aviation tests required to issue or add ratings to the maintenance license, or to permanently approve them by an approved maintenance organization, to perform some specific tasks in the civil aviation field.

147.13 General curriculum requirements

- (a) These curriculums shall provide the minimum level of knowledge and experience required by Part 65.
- (b) They shall conform with the corresponding knowledge level defined in the Egyptian Civil Aviation Training Standard Handbook (ECATSH).
- (c) It is preferable to comply with the corresponding curriculums used in the international training centers of aircraft's manufacturers and their units.
- (d) A syllabus shall be established for each curriculum including a schedule for each part of the curriculum suitable to the trainees' level.
- (e) References, from which curriculum parts are extracted, and which conform with the approved publications of the manufacturer or ICAO or other approved training centers shall be specified in a syllabus.
- (f) Syllabus shall list the training aids necessary for each part in order to reach the goal sought.
- (g) The sequential order to follow in teaching the curriculum parts, and also the intermediate requirements shall be specified in the syllabus.
- (h) The curriculum must show:
 - (1) The required practical projects to be completed.
 - (2) A list of the minimum required tests to be given.

147.15 Approval procedure

- (a) The training department shall submit the curriculum for approval, at least 15 days before conducting it for the first time using the appropriate application form issued by the ECAA.
- (b) The applicant is responsible to provide all facilities and information required to study the approval requested.
- (c) When preliminary acceptance to the proposed curriculum is granted, the applicant shall provide two copies of the training manuals pertaining to the curriculum along with all related official documents.

- (d) Upon fulfilling all demands of the ECAA, a coded approval number is issued to the curriculum, designating the applicant name, the curriculum level and its specification and completeness, its training specifications and issue year, and revision number in this year.

147.17 To maintain approval validity

- (a) The curriculum shall be experienced practically in a trial course under the supervision of the ECAA inspectors to demonstrate its competence for actual application.
- (b) Each certificated aviation maintenance shall adhere to its approved curriculum. However the curriculum shall be modified whenever new discoveries arise in any of its parts, in order to conform to minimum level of international development in its field. Upon modification of parts of the curriculum an application shall be submitted for revalidation before applying it in any training course.
- (c) The ECAA may suspend the approval given to any curriculum when it deviates from any of the approval requirements. If it doesn't satisfy the requirements to resume its validity, the ECAA can revoke it either completely or partially according to the situation.

147.19 Approval of training courses (training specifications)

- (a) An approved curriculum or parts of approved curriculums shall be specified for each course.
- (b) Prerequisites for each course shall be specified.
- (c) A sufficient number of approved instructors, specialized for each of the different parts of the curriculum, shall be nominated accordingly.
- (d) Approved training manuals or documents pertaining to the course shall comply with parts of the curriculum covering the course schedule, and shall be precise (i.e. clear and with distinct chapters, and revised according to the most recent modifications) and appropriately packaged.
- (e) Approved classrooms equipped with necessary training aids to teach the theoretical parts of the course syllabus shall be specified.
- (f) Approved departments equipped with necessary training facilities to achieve the practical parts of ground training courses, shall be specified.
- (g) A certificate or result form, designed in a way conforming with the training order issued for each course, shall be determined along with approved signatories.
- (h) The name or title of the course, shall identify some of the following details, to classify the course according to the appropriate training specifications:
 - (1) Level divisions: first, second, or third (according to the ICAO ratings), or: basic specific, or advanced (according to the ECAA ratings respectively);
 - (2) Type divisions: general, familiarization, initial, conversion, differences, practical, trouble shooting, refreshing, simulator, complementary or regulations;
 - (3) Field divisions: Repair, overhaul, line maintenance, chemical, NDT, or taxiing;
 - (4) Specialization division: airframe, engine, radio / radar, electrical or avionics, units or devices;
 - (5) Model of: aircraft, engine, unit or device; and
 - (6) In the case of creating any other nominations they shall be approved in advance from the ECAA.
- (i) The training department shall submit for the approval of the course, at least 15 days before conducting it for the first time, using the appropriate form issued by the ECASA, along with all necessary documents to fulfill the requirements for approval.
- (j) The applicant shall present all facilities and information requested by the ECAA inspectors to examine for course approval.
- (k) Within one week of completing the inspections, the applicant will be notified of any additional requirements.
- (l) Upon fulfilling all above mentioned recommendations, a permission is granted to conduct the course once to prove the efficiency and capabilities of conducting all parts of the course, to allow issuing of the permanent approval of the course.

- (m) The training department shall issue a course training order before conducting it, and send it to the ECAA, at least one week in advance, to allow the ECAA inspectors to perform the necessary review.
- (n) Training orders shall contain (at least) the following data:
 - (1) Name of training school and its approval number;
 - (2) Training order number and its date of issue;
 - (3) Course name and its approval number;
 - (4) Starting and terminating dates of the course, and its schedule;
 - (5) Name of approved instructors assigned to teach different parts of the curriculum, and their approval number;
 - (6) Different places where parts of the syllabus will be conducted, and their approval number;
 - (7) Name of technical supervisors of the course; and
 - (8) Name of trainees and their fulfillment of the prerequisites of the course.

Note: In case any approved course is conducted without submitting its training order, its graduates will not be allowed to apply for issue or addition of ratings or temporary approvals related to that course.
- (o) If the evaluation reports regarding any course presented by either the supervisors or the inspectors (in the majority) will prove that the course is below average, the approval will be suspended until corrective actions have been implemented. Then the course will be allowed to be conducted once to reevaluate it and if the audit standards are met then its approval resumes, otherwise, it will be revoked completely or partially according to the situation.

147.20 Validation of courses performed outside country

Training courses performed in locations outside country which are not approved under ECAR 147 shall be done in either locations approved by its local authority or by manufacturer/AMO after reviewing the syllabus and attending the course by an ECAA inspector at least once every two years to validate the course. ````

SUBPART C

Certification Requirements

147.21 Facilities, equipment, and material requirements

An applicant for an aviation training certificate and training specification, or for an additional training specification, must have access to, the necessary information, equipment, training devices and material to conduct the courses for which it is approved, and at least the facilities, equipment, and material specified in this Part that are appropriate to the training specification he seeks.

(a) Classrooms:

- (1) The classroom shall be well lighted and provide the appropriate means to shadow natural light when using video tapes or similar devices;
- (2) The classroom shall be well ventilated and be capable of maintaining a comfortable degree of temperature and humidity;
- (3) The classroom shall be in a quiet place, far from any environmental activities or noise;
- (4) The classroom shall be of adequate size, and the number of trainees shall not exceed 28;
- (5) The classroom shall be equipped with a convenient blackboard and equipped with all necessary training aids for each approved course;
- (6) Each trainee shall have a chair and a table at least 50 x 75 cm ; and
- (7) The training department shall submit, at least 60 days before conducting any training activities in a new classroom an application for approval of this classroom, using the appropriate application form issued by the ECAA for that purpose. The applicant shall allow the ECAA delegates to inspect the classroom, to insure compliance with specifications. Upon fulfilling the above steps a certificate of approval is issued to the classroom defining the limitations of approval if any. The ECAA shall be notified of any major change occurring to the classroom building or its installations or environment, at least 3 weeks before conducting any training activities within it.

(b) Workshops or laboratory requirements:

- (1) All suitable facilities must be arranged to assure proper separation from the working space, for parts, tools, materials, and similar articles;
- (2) Suitable areas for application of finishing materials, including paint spraying;
- (3) Suitable areas equipped with wash tank and degreasing equipment, with air pressure or other adequate cleaning equipment;
- (4) Suitable facilities for running engines;
- (5) Suitable area with adequate equipment, including benches, tables and test equipment, to disassemble, service, and inspect:
 - (i) Ignition, electrical equipment, and appliances;
 - (ii) Carburetors and fuel systems; and

- (iii) Hydraulic and vacuum systems for aircraft, aircraft engines and their appliances.
- (6) Suitable space with adequate equipment, including tables, benches, stands, and jacks, for disassembling, inspecting, and rigging aircraft; and
- (7) Suitable space with adequate equipment for disassembling, inspecting, assembling, troubleshooting, and trimming engines.
- (c) Instructional equipment requirements:
 - (1) An applicant for a training certificate and training specification must have the following instructional equipment as is appropriate for the training specification he seeks:
 - (i) Various kinds of airframe structures, airframe systems and components, powerplants, and powerplant systems and components (including propellers), of a quantity and type suitable to complete the practical projects required by its approved curriculums; and
 - (ii) At least one aircraft of the type, with powerplant, propeller, instruments, navigation and communications equipment, landing lights, and other equipment and accessories on which the maintenance personnel may fulfill their on-job training requirements.
 - (2) The equipment required by paragraph (c) of this section need not to be in an airworthy condition. However, if it was damaged, it must have been repaired enough for complete assembly;
 - (3) Airframes, powerplants, propellers, appliances, and components thereof, on which instruction is to be given, and from which practical working experience is to be gained, must be so diversified as to show the different methods of construction, assembly, inspection, and operation when installed in an aircraft for use. There must be enough units so that not more than eight students will work on any unit at a time to the satisfaction of ECAA. Meanwhile the number of students per an instructor shall not exceed eight students; and
 - (4) If the aircraft used for instructional purposes does not have retractable landing gear and wing flaps, the school must provide corresponding training aids.
- (d) Materials, special tools, and shop equipment requirements:

An applicant for an aviation maintenance school certificate and training specification, or for an additional training specification, must have an adequate supply of materials, special tools, and shop equipment as appropriate to the approved curriculum. The special tools and shop equipment must be in satisfactory working condition for the purpose for which they are to be used; and
- (e) Maintenance of facilities, equipment, and material:
 - (1) Each certificated aviation maintenance school shall provide facilities, equipment, and material equal to the standards currently required for the issue of the certificate and training specification that it holds; and
 - (2) A school may not make a substantial change in facilities, equipment, or material that has been approved for a particular curriculum, unless that change is approved by the ECAA in advance.

147.23 Instructor requirements

An applicant for an aviation maintenance school certificate and training specification, or for an additional training specification, must provide the number of instructors holding appropriate certificates and ratings that the ECAA determines necessary to provide adequate instruction and supervision of the students, including at least one such instructor for each 18 students in each shop class. The applicant is required to maintain a list of the names and qualifications of specialized instructors, and upon request, provide copy of the list to the ECAA.

- (a) Approval requirements:
 - (1) The training organization shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training programmer established by the training organization shall include approval training procedure and training in knowledge and skills related to human performance.
 - (2) He must have had a license issued in any civil aviation field;
 - (3) He shall have accomplished the specific training related to the subjects he aims to teach with 3 years of relevant experience including 1 year of experience on

the relevant A/C type (S) . the experience must be representative of the elements(s) to be taught and gained in civil aviation environment or acceptable equivalent (maintenance , engineering , design organization or other) .

- (4) The training department shall submit an application for approval of the instructor, using the appropriate form issued by the ECAA, along with all the official documents required before conducting any training activity requiring approval;
 - (5) The applicant shall be given, within two weeks of submitting the application with the ECAA, the requirements to issue the approval;
 - (6) Upon fulfilling all the requirements, the instructor will be allowed to teach a course once under the supervision of approved civil aviation inspectors;
 - (7) If his skills do not meet ECAA standards he will be notified that he did not meet the standards. He will be allowed to teach one class and if he again fails to meet ECAA standards, his request for approval will be denied;
 - (8) If his performance meets ECAA standards then an instructor approval valid for three years will be issued to him; and
 - (9) When an approved instructor receives any approved specific course, his training department can apply to ECAA to add it to his instructor approval.
- (b) Maintenance of instructor requirements:
- (1) If any major change occurs in the teaching technique, adopted in the instructor's field of specialization, he shall notify the ECAA with the change at least 3 weeks in advance, using the appropriate form issued by the ECAA;
 - (2) Two weeks before the expiration date of his approval, he shall submit an application for renewal, using the appropriate form issued by the ECAA;
 - (3) His average evaluation report issued by the ECAA during his approval validity period must meet ECAA standards, otherwise he will be notified of the ECAA requirements, and allowed a period of time to fulfill them. If he fails to meet the ECAA requirements, his approval will be revoked either completely or partially according to the situation; and
 - (4) Each certificated aviation maintenance school shall, after certification or addition of a training specification, continue to provide the number of instructors holding appropriate mechanic certificates and training specifications that the ECAA determines necessary to provide adequate instruction to the students.
- (c) Quality of instruction:
- Each certificated aviation maintenance school shall provide a level of instruction such that during any period of 24 calendar months at least 70% of its graduates successfully pass the corresponding rating approved tests within 60 days after their graduation.
- (d) Transcripts and graduation certificates:
- (1) Upon request, each certificated aviation maintenance school shall provide a transcript of the student's grades to each student who is graduated from that school or who leaves it before being graduated. An official from the school shall authenticate the transcript. The transcript must state the curriculum in which the student was enrolled, whether the student satisfactorily completed that curriculum, and the final grades the student received; and
 - (2) Each school shall give a graduation certificate or certificate of completion to each student that it graduates. An official from the school shall authenticate the certificate. The certificate must show the date of graduation and the approved curriculum title.
- (e) Records:
- (1) The training organization shall retain detailed student records to show that all requirements of the training course have been met as agreed by the Licensing Authority.
 - (2) The training organization shall maintain a system for recording the qualifications and training of instructional and examining staff where appropriate.
 - (3) The records required by (1) shall be kept for a minimum period of two years after completion of the training. The records required by (2) shall be retained for a minimum period of two years after the instructor or examiner ceases to perform a function for the training organization.

147.25 Safety management system

A service provider / operator, who is certified under this part, shall show a complete compliance with ECARs, Part 19, by establishing a safety management system that is acceptable to the ECAA, maintaining it, and completing its implementation as per the chronology mentioned in this regulation.

147.27 through 147.29 Reserved

SUBPART D **Examining Authority**

147.31 Applicability

This subpart prescribes the requirements for the issuance of examining authority, and the privileges and limitation of that authority.

147.33 Application and qualification

- (a) Application for an examining authority is made on a form and in a manner prescribed by the ECAA.
- (b) To be eligible for an examining authority an applicant must fulfill the following conditions:
 - (1) Examiners and evaluators shall be approved instructors who previously participated in teaching the courses subject to test or have previous experience in evaluating similar materials;
 - (2) Tests shall be conducted in approved facilities;
 - (3) Time required for exams shall be appropriate to answer all questions;
 - (4) The exam of each course shall cover all subjects taught in that course while avoiding concentration on one specific subject;
 - (5) It is possible to prepare a collection of questions, covering all syllabus points with a number satisfactory to the ECAA, and providing them to the students, and choosing from these questions for any exam; and
 - (6) All exam questions shall satisfy the following conditions:
 - (i) Each question shall deal with one point only;
 - (ii) Questions shall be short, direct, definite, concise, clear and deduced from approved course references, and shall not contain any additional outside information;
 - (iii) Questions shall not have multiple meanings and shall have only one correct answer;
 - (iv) All questions shall be positive, and shall avoid negative verbage and indirect or composite questions;
 - (v) Multiple choice questions and their answers shall be extracted from approved course references;
 - (vi) Questions giving information about other questions shall be prevented; and
 - (vii) Maintenance and overhaul exams shall be open book, and may be composed of multiple choice questions to a maximum of 75% of the questions.

147.35 Approval procedure

- (a) The applicant shall submit a request for approval to conduct certification exams on a form and in a manner prescribed by the ECAA, at least 3 weeks before conducting the course exam for the first time.

- (b) Upon fulfilling all approval requirements, permission is normally given to the training department to conduct the exam once under the supervision of ECAA inspectors.
- (c) If no objections are found on the type of exam presented, The ECAA may then approve the exam.

147.37 through 147.109 Reserved

SUBPART E
Drug and alcohol testing programs

147.111 Testing for prohibited drugs

- (a) Each certificate holder shall test each of its employees who performs a function listed in Appendix I to Part 121 in accordance with that appendix.
- (b) No certificate holder may use any contractor to perform a function listed in Appendix I to Part 121 unless that contractor tests each employee performing such a function for the certificate holder in accordance with that appendix.
- (c) Each certificate holder shall submit a drug testing program plan to the ECAA (specifying the procedures for all testing required by appendix I) . Each certificate holder shall implement its program not later than 30 days after approval of the program by the ECAA.
- (d) ECAA may conduct random drug testing checks.

147.113 Misuse of alcohol

- (a) General. This section applies to employees who perform a function listed in appendix J to Part 121 for a certificate holder (covered employees). For the purpose of this section, a person who meets the definition of covered employee in appendix J is considered to be performing the function for the certificate holder.
- (b) Alcohol concentration. No covered employee shall report for duty or remain on duty requiring the performance of safety-sensitive functions while having an alcohol concentration of 0.04 or greater. No certificate holder having actual knowledge that an employee has an alcohol concentration of 0.04 or greater shall permit the employee to perform or continue to perform safety-sensitive functions.
- (c) On-duty use. No covered employee shall use alcohol while performing safety-sensitive functions. No certificate holder having actual knowledge that a covered employee is using alcohol while performing safety-sensitive functions shall permit the employee to perform or continue to perform safety-sensitive functions.
- (d) Pre-duty use.
 - (1) No covered employee shall perform training duties within 8 hours after using alcohol. No certificate holder having actual knowledge that such an employee has used alcohol within 8 hours shall permit the employee to perform or continue to perform the specified duties.
 - (2) No covered employee shall perform safety-sensitive duties other than those specified in paragraph (d)(1) of this section within 4 hours after using alcohol. No certificate holder having actual knowledge that such an employee has used alcohol within 4 hours shall permit the employee to perform or continue to perform safety-sensitive functions.
- (e) Use following an accident. No covered employee who has actual knowledge of an accident involving an aircraft for which he or she performed a safety-sensitive function at or near the time of the accident shall use alcohol for 8 hours following

the accident, unless he or she has been given a post-accident test under appendix J to Part 121, or the employer has determined that the employee's performance could not have contributed to the accident.

- (f) Refusal to submit to a required alcohol test. No covered employee shall refuse to submit to a post-accident, random, reasonable suspicion, or follow-up alcohol test required under appendix J to Part 121. No certificate holder shall permit an employee who refuses to submit to such a test to perform or continue to perform safety-sensitive functions.

147.115 Testing for alcohol

- (a) Each certificate holder must establish an alcohol misuse prevention program in accordance with the provisions of appendix J to Part 121.
- (b) No certificate holder shall use any person who meets the definition of covered employee in appendix J to Part 121 to perform a safety-sensitive function listed in that appendix unless such person is subject to testing for alcohol misuse in accordance with the provisions of appendix J.
- (c) Each certificate holder shall submit an alcohol misuse prevention program plan to the ECAA (specifying the procedures for all testing required by appendix J) not later than January 1, 2002. Each certificate holder shall implement its program not later than 30 days after approval of the program by the ECASA. In any case the final implementation date of this program shall not be later than March 1, 2002.
- (d) Starting from September 1, 2001, ECAA may conduct random alcoholic testing.

APPENDIX A**App 147A.1 Definitions and abbreviations**

- (a) Schools means for the purpose of this part: Training departments, centers, institutes, and or divisions.
- (b) ECAA means Egyptian Civil Aviation Authority.

Appendix B

Approval of Aviation Maintenance schools under adopted regulations from EU

147.ab.1 Effectivity

This appendix will be effective from January 1, 2020

147. ab.3 Applicability

- (a) This Appendix establishes the requirements to be met by organizations seeking approval to conduct training and examination as specified in ECATSH and ECAESH up to the adoption of EASA Part 66.
- (b) Each person who applies for such approval or change must show compliance with the applicable requirements of Annex IV (part 147) of EU regulation No. 1321/2014 as amended, and their guidance material except the items referred to in 147.aa.5, applicant has to comply with them rather than compliance with EU regulations

147. ab.5 Expected differences from EU regulations

The following is a list of expected differences from Annex IV (part 147) of EU regulation No. 1321/2014

- (a) Competent authority shall be ECAA
- (b) 147.A.05 Scope :This Appendix establishes the requirements to be met by organizations seeking approval to conduct training and examination as specified in ECAR part 65 up to the adoption of EASA part 66.
- (c) 147.A.145 (a) (1) : Annex III (Part-66) syllabus is replaced ECATSH up to the adoption of EASA part 66.
- (d) 147.A.145 (a) (2) : Annex III (Part-66) is replaced ECATSH up to the adoption of EASA part 66.
- (e) 147.A.145 (a) (3) : Suspended up to the adoption of EASA part 66
- (f) 147.A.155 (a): An approval shall be issued for two years duration. It shall remain valid subject to.....
- (g) 147.A.205 (c): Annex III (Part-66) is replaced by ECATSH and ECAESH up to the adoption of EASA part 66.
- (h) 147.A.300 Aircraft type/task training :A maintenance training organisation shall be approved to carry out aircraft type and/or task training subject to compliance with the standard specified in ECATSH.
- (i) 147.A.305 Aircraft type examinations and task assessments :A maintenance training organisation approved in accordance with point 147.A.300 to conduct aircraft type training shall conduct the aircraft type examinations or aircraft task assessments specified in ECAESH subject to compliance with the aircraft type and/or task standard specified in ECAR 65 up to the adoption of EASA part 66.