



# Advisory Circular

TCAA-AC-PEL018D

August, 2023

## **THEORETICAL KNOWLEDGE TESTING FOR A LICENCE OR RATING**

### **1.0 PURPOSE**

This Advisory Circular is issued to give guidance on the theoretical knowledge testing for a licence, certificate or rating. Examination subjects are available to the public from the Personnel Licensing (PEL) Office through either the printed or electronic means.

### **2.0 REFERENCES AND FORMS**

2.1 Regulation 26 and relevant regulations in Parts VI, VII, VIII and IX of the Civil Aviation (Personnel Licensing) Regulations;

#### **2.2 The prescribed Forms**

### **3.0 GUIDANCE AND PROCEDURES**

#### **3.1 General Information**

The booking of the examinations may be done at the Authority's Personnel Licensing (PEL) Office and the prescribed application forms for booking of the examination may be obtained from the Authority's PEL Office.

#### **3.2 Theoretical Knowledge Testing**

**3.2.1** Theoretical knowledge tests are provided for the issue of the following licences and certificates:

- a) Private Pilot Licence;
- b) Commercial Pilot Licence;
- c) Airline Transport Pilot Licence;
- d) Ground Instructor Licence;
- e) Flight Engineer Licence;
- f) Air Traffic Controller Licence;
- g) Aircraft Maintenance Engineer Licence;
- h) Flight Operations Officer Licence;
- i) Flight Radiotelephony Operator Licence,
- j) Cabin Crew Member Certificate; and



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k) Remote Pilot Licence

**3.2.2** The requirement for the specific knowledge tests are as detailed in the relevant regulations of the specific Licence under the Civil Aviation (Personnel Licensing) Regulations for the specific licence, certificate or rating sought.

### **3.3 Booking and Payment of the Examination**

**3.3.1** All examinations are booked in the PEL office

**3.3.2** Applicants are required to provide the PEL office (where applicable), with the instructors written recommendation certifying that the applicant has been instructed and is qualified to sit for the examination sought.

**3.3.3** All examination fees shall be paid on booking and not later than the set booking date.

**3.3.4** Applicants who cancel the examination booking by the booking date will be credited with the examination fees.

**3.3.5** Applicants who cancel the examination booking after the booking date and before the examination date shall be credited with 50% of the examination fees.

**3.3.6** Applicants who do not turn up for the booked examination will lose the examination fees.

**3.3.7** Candidates who report ill for an examination will be required to submit a medical report from a medical doctor before being allowed to sit for the booked examination.

**3.3.8** Based on the medical report which should be presented to the booking office by the examination date or other reasonable excuses, candidates may be allowed to sit the booked examination without losing the examination fees already paid; and

**3.3.9** No cash refund for any fees paid.

### **3.4 Examination Venue**

Examinations are conducted at the venue to be advised at the time of booking for the examination.

### **3.5 Invigilator and his Responsibilities**

**3.5.1** Suitable invigilator(s) must be available who understand the nature of the examinations and the requirements for their conduct. The invigilator must be a properly trained and qualified individual appointed by the Authority to administer aviation knowledge tests. The invigilator administering the



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aviation knowledge test must positively identify each applicant, ensure proper test authorisation is presented, and ensure proper completion of the Test Centre Requirements

**3.5.2** The invigilator shall not administer a test to an applicant who does not have satisfactory documentation of test authorization, as is required by Regulation 26 of the Civil Aviation (PEL) Regulations.

**3.5.3** The invigilator will provide each applicant with –

- a) A set of instructions for taking the test either by computer or in paper format;
- b) The required supplementary materials free of extraneous marks;
- c) An accountable number of sheets of scratch paper;

**3.5.4** Inspect the aid(s) the applicant plans to use during the test to ensure that they meet the guidelines issued;

**3.5.5** Ensure that the proper examination is available;

**3.5.6** Answer applicant’s questions regarding the proper use of equipment;

**3.5.7** Monitor all activities in the examination room and be on the alert for any misconduct;

**3.5.8** Collect printed examinations, handouts and scratch paper at the close of the examination;

**3.5.9** Advise the applicant prior to the beginning of the examination that if a break is necessary, examination time continues uninterrupted and the invigilator will monitor the applicant’s whereabouts during this break.

## **3.6 Time Allowed for Examination**

The time allowed for the completion of each examination shall be given to the applicant during initial booking of the examination and by the invigilator before start of the examination. The invigilator will use terms such as “start now” and “finish now”, “no more writing please”, and must require that these instructions be obeyed.

## **3.7 Misconduct During Examination**

If an applicant appears to be cheating, the invigilator shall immediately discontinue the examination and escort the applicant from the room to avoid disturbing others who may be taking examinations. The invigilator will collect all the applicant’s examination materials, including supplementary materials, and advise the applicant that further examination may continue only after the Authority completes an investigation.



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## 3.8 Examination Passing Grades

**3.8.1** In order to qualify, candidates must obtain not less than 70% of the possible marks for each subject.

**3.8.2** The examination passing grades are as follows:

**a) Private Pilot Licence Subjects:**

- (i) Air Law
- (ii) Aircraft General Knowledge
- (iii) Flight Performance and Planning
- (iv) Human Performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operational Procedures
- (viii) Principles of Flight
- (ix) Radio Telephony.

**Pass Mark per subject is 70%**

**b) Commercial Pilot Licence Subjects:**

- (i) Air Law
- (ii) Aircraft General Knowledge
- (iii) Flight Performance and Planning
- (iv) Human Performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operational Procedures
- (viii) Principles of Flight
- (ix) Radio Telephony (if applicable)

**Pass Mark per subject is 70%**

**c) Airline Transport Licence Subjects:**

- (i) Air Law
- (ii) Aircraft General Knowledge
- (iii) Flight Performance and Planning



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- (iv) Human Performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operational Procedures
- (viii) Principles of Flight
- (ix) Radio telephony (if applicable)

**Pass Mark per subject is 70%**

**d) Ground Instructor Licence Subjects:**

- (i) the learning process;
- (ii) elements of effective teaching;
- (iii) student evaluation and testing;
- (iv) course development;
- (v) lesson planning;
- (vi) classroom training techniques;
- (vii) techniques of applied instructions;
- (viii) use of training aids;
- (ix) analysis and correction of student errors; and
- (x) human performance relevant to ground instruction and
- (xi) pass a knowledge test on the aeronautical knowledge areas specified in applicable Regulation.

**Overall Pass Mark is 70%**

**e) Flight Engineer Licence Subjects:**

- (i) Air Law
- (ii) Aircraft General Knowledge
- (iii) Flight Performance and Planning
- (vi) Human Performance



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- (iv) Operational Procedures
- (v) Principles of Flight: Fundamentals of Aerodynamics
- (vi) Radio Telephony: Radio Telephony Procedures and Phraseology

**Pass Mark per subject is 70%**

**f) Air Traffic Controller Licence Subjects:**

- (i) Air Law
- (ii) Air Traffic Control Equipment
- (iii) General Knowledge
- (iv) Human Performance
- (v) Language
- (vi) Meteorology
- (vii) Navigation
- (viii) Operational Procedures

**Pass Mark per subject is 70%**

**g) Flight Operations Officer Licence Subjects:**

- (i) Air Law
- (ii) Aircraft General Knowledge
- (iii) Flight Performance calculation and Planning procedures
- (iv) Human Performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operational Procedures
- (viii) Principles of Flight
- (ix) Radio communication: procedures for communication with aircraft and relevant ground stations

**Pass Mark per subject is 70%**

**h) Flight Radio Telephony Operator Licence Subjects:**

- (i) the ICAO spelling alphabet;
- (ii) departure and position reporting;



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- (iii) obtaining meteorological information;
- (iv) transmission and procedures of distress and urgency signals;
- (v) communication techniques and Radio Telephony procedures and phraseology;
- (vi) the necessity for brevity in radiotelephony communication and priorities;
- (vii) pre-flight briefing;
- (viii) classification of directional finding bearings;
- (ix) radiotelephony facilities and frequencies available in the Flight Information Region (FIR);
- (x) Information Region (FIR);
- (xi) elementary knowledge of the relationship between wavelength and frequency;
- (xii) and frequency;
- (xiii) ability to use the radio equipment of the type installed in the aircraft and including the ability to carry out emergency procedures.

**Overall Pass Mark is 70%**

**i) Cabin Crew Member Certificate Subjects:**

(aa) An applicant for a cabin crew member certificate shall have met the knowledge requirements for cabin crew member certificate under Regulation 138 of the Civil Aviation (Personnel Licensing) Regulations.

- (i) fire and smoke training;
- (ii) water survival training;
- (iii) survival training appropriate to the areas of operation such as polar, desert, jungle or sea;
- (iv) medical aspects and first aid;
- (v) passenger handling;
- (vi) communication;
- (vii) discipline and responsibilities;
- (viii) crew resource management.

(bb) The applicant should have clear knowledge of the following –

- (i) the responsibility of cabin crew member to deal promptly with emergencies involving fire and smoke and, in particular, emphasis on the importance of identifying the actual source of the fire;
- (ii) The importance of the cabin crew member informing the flight crew member immediately, as well as the specific actions necessary for co-ordination and assistance, when fire or smoke is discovered;
- (iii) the necessity for the cabin crew member doing frequent checking of potential fire-risk areas including toilets and the associated smoke detectors;
- (iv) the classification of fires and the appropriate type of extinguishing agents and procedures for particular fire situations, the techniques of application of extinguishing agents, the consequences of misapplication, and of use in a confined space; and
- (v) the general procedures of ground based emergency services at aerodromes



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**Overall Pass Mark is 70%**

## **(J) Aircraft Maintenance Engineer Licence**

**3.8.3** The detailed information concerning theoretical knowledge requirements and examination for issue or extension of Aircraft Maintenance Engineer Licence are contained in the PEL Advisory Circular TCAA-AC-PEL013C.

**3.8.4** Candidate for AMEL are given three (3) attempts to pass the examinations in which each attempt is separated by 90 days in between in case of failure. Failing this, a candidate will have to start the written part of the modules. The duration of examination process for AMEL is 18 months beyond that, respective candidate will have to start a fresh all examination subjects/modules.

## **3.9 Appeal For A Failed Test :-**

Where an applicant has failed a knowledge test, he may appeal to the Authority, if he wishes to contest the fail result, by presenting the appeal case in writing to the Authority within 14 days from the date of the test result.

## **3.10 Examination Pass Standards**

**3.10.1** Candidates for examinations listed in 3.8 above other than CPL and, ATPL are required to take a single examination sitting in all subjects. A candidate who passes in not less than 50% of the subjects will be awarded a partial pass and will be allowed two further attempts to pass the outstanding subjects. A total pass of all subjects must be accomplished within a three months period from the date of commencement of the first sitting. Failing this, a candidate would not be allowed to re-sit, the examination before a waiting period of not less than 30 days.

**3.10.2** Candidates for CPL and ATPL are required to take a single examination sitting in all subjects. A candidate who passes in not less than 50% of the subjects will be awarded a partial pass and will be allowed two further attempts to pass the outstanding subjects. A total pass of all subjects must be accomplished within one year from the date of commencement of the first sitting. Failing this, a candidate would not be allowed to re-sit, the examination before a waiting period of not less than 90 days.

## **3.11 Attendance at the Examination**

**3.11.1** Candidates should be present at the examination room with proof of identity at least fifteen (15) minutes prior to the scheduled time for the commencement of each examination paper. Candidates must not remain in the room after they finish the examination period unless they are taking an examination in the next period.





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**3.11.2** Bags, briefcases, cellular phones, programmable calculators, multipurpose pen, beepers, watches, flash dish etc are NOT PERMITTED in the examination room, but if suitable facilities are not available, such personal belongings may be placed at the front side of the examination room, under the direction of the invigilating officer.

**3.11.3** Examination results will be released to the candidates five (5) working days and through email address.

## **3.12 Materials for the Examination**

**3.12.1** When necessary the following reference books and tables will be supplied to each candidate but they must not be marked in any way or removed from the examination room.

**3.12.2** Candidates are NOT permitted to bring their own tables, reference books or papers, including instruction books for calculators and computers into the examination room. For Performance Examination candidates will be provided with appropriate aircraft performance (Charts) and a copy of the applicable Regulations.

**3.12.3** Candidates are required to provide themselves with all the necessary drawings and calculating instruments, e.g. Dividers, compasses, protractors, parallel rules, slide rules, and navigational computers. No pencil boxes, containers or instrument cases are permitted on the tables. The use of slide rules or instruments containing printed information on critical points, point of no return, distance to the horizon, convergence angle, conversion factors, etc. is not permitted.

**3.12.4** Candidates will NOT be permitted to use calculators which are programmable; those having a navigation function; those having a hard copy printout; or devices having an alpha-numeric data bank. However they may use simple wrist or hand held electronic calculators in the examinations.

**3.12.5** Calculators must not be used in such a manner, or be of such a type, as to cause distraction to other candidates.

**3.12.6** A candidate must accept the risk that the misuse or malfunctioning of a calculator may lead to an incorrect answer. No allowance for such an occurrence can be made by the Authority in marking the paper.

**3.12.7** All relevant data must be entered in appropriate forms when so directed. Power supplies for operating or recharging electronic calculators may not be available in the examination room.

**3.12.8** All used or unused writing paper and other materials supplied to the candidate must be returned to the invigilator at the end of the examination.

## **3.13 Rules to be Applied for Conduct of Examination**



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**3.13.1** All work must be shown in the proforma, or navigation log forms or on foolscap when so directed; candidates are not allowed to use any loose paper other than that provided at the examination. All papers are to be returned with the answer sheet to the invigilator on completion.

**3.13.2** Answer sheets are to be completed using pen. Candidates may use other writing implements for navigation and flight planning at the discretion of the invigilator.

**3.13.3** Silence is to be observed in examination room at all times.

**3.13.4** If a candidate wishes to speak to the invigilating officer, he should remain seated and raise his hand. It should be noted that the invigilating officer will consider only those questions from candidates, which relate to the general conduct of the examinations and he will not enter into discussion on the interpretation of words or questions contained in the examination papers.

**3.13.5** A candidate may leave the room if he finishes before time, except during the last five (5) minutes before the end of the paper and subject always to the permission of the invigilating officer. Candidates are to stop work when so directed and must remain seated until all answer material has been collected.

**3.13.6** Any candidate who attempts to remove unauthorized examination materials from the room will be liable to disqualification from those examinations, which have been taken.

## **3.14 Validity of Knowledge Test Results**

Each Knowledge Test Result is valid for a period as stated in the specific Civil Aviation (Personnel Licensing) Regulations for each specific type of the licence.

A handwritten signature in blue ink, appearing to read 'M. Ash', is written over a horizontal line. The signature is stylized and cursive.

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**Director Safety Regulation**