



Islamic Republic of Afghanistan
Civil Aviation Authority

KNOWLEDGE TESTING FOR A LICENSE, CERTIFICATE OR RATING

**AFGHANISTAN CIVIL AVIATION AUTHORITY DIRECTIVE
(ACAD)**

ACAD-PEL-020.0

Personnel Licensing

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Director General
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0 Administration and Control

The following list contains key abbreviations used in this document, as well as others likely to be in common use in the respective area.

0.1 Abbreviations

ACAA	Afghanistan Civil Aviation Authority
ACAR	Afghanistan Civil Aviation Regulation
ATM	Air Traffic Management
ATPL	Air Transport Pilots License
CNS	Communication Navigation Surveillance
CPL	Commercial Pilots License
FIR	Flight Information Region
ICAO	International Civil Aviation Organization
PEL	Personnel Licensing



0.2 Record of Revision

The revision page shall be completed to show: revision number, effective date of the revision, description of changes and the responsible person. Revised pages will display the DD MMM YYYY revision date and revision number on the bottom of each page. Any revision shall display the next sequential number.

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1 Purpose

This Directive is issued to provide guidance on the knowledge testing for a license, certificate or rating under Part 2 of the ACARs. The Personnel Licensing Office (PEL Office) is responsible for administering aviation knowledge tests by selecting the time and place for the examination and giving clear instructions to the applicant. Examinations by subject are available to the public through either printed or electronic means.



2 References

- 2.1 ACAR Version 2.6 November 2011, Part 2.2.5.4 and 2.2.5.5.



3 Guidance and procedures

3.1 Preparation and Control of Tests

3.1.1 Knowledge tests are provided for the issue of the following licenses, certificates and ratings:

- a) Private Pilot License (ACAR 2.3.4.1);
- b) Commercial Pilot License (ACAR 2.3.5.1);
- c) Airline Transport License (ACAR 2.3.6.1);
- d) Flight Instructor License (ACAR 2.3.8.2);
- e) Ground Instructor License (ACAR 2.3.8.5);
- f) Flight Engineer License (ACAR 2.4.4.1);
- g) Flight Navigator License (ACAR 2.5.4.1);
- h) Air Traffic Controller License (ACAR 2.7.3.1);
- i) Aeronautical Station Operator License (ACAR 2.9.3.1);
- j) Air Traffic Safety Electronic Personnel License (ACAR 2.9A.3.1);
- k) Aviation Maintenance Technician License (ACAR 2.6.2.4);
- l) Flight Operations Officer License (ACAR 2.8.3.1);
- m) Senior Parachute Rigger License (ACAR 2.10.1.4);
- n) Master Parachute Rigger License (ACAR 2.10.1.5);
- o) Flight Radiotelephone Operator License (ACAR 2.2.1.1);
- p) Flight Navigator Examiner Designation (ACAR 2.5.6.1);
- q) Instrument Rating (ACAR 2.3.6.7);
- r) Airframe Rating (ACAR 2.6.2.5);
- s) Powerplant Rating (ACAR 2.6.2.5);
- t) Avionics Rating (ACAR 2.6.2.5);
- u) Air Traffic Controller Rating (ACAR 2.7.3.2);
- v) Inspection Authorization (ACAR 2.6.3.3); and
- w) Cabin Crew License (ACAR 8.10.1.34).

3.1.2 The requirement for the specific knowledge tests are as detailed in the relevant regulations of Part 2 of the ACARs (see also [3.1.1](#)) for the specific license, designation or rating sought.

3.2 Booking and Payment for the Examination

3.2.1 All examinations are booked in the PEL office.



- 3.2.2 Applicants are required to provide the instructors written recommendation certifying that the applicant has been instructed and is qualified to sit for the examination sought.
- 3.2.3 All examination fees shall be paid on booking and not later than the set booking date.
- 3.2.4 Applicants who cancel the examination booking by the booking date will be credited with the examination fees.
- 3.2.5 Applicants who reschedule the examination booking after the booking date and before the examination date shall be credited with 100% of the examination fees.
- 3.2.6 Applicants who do not turn up for the booked examination will lose the examination fees.
- 3.2.7 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.
- 3.2.8 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.
- 3.2.9 No refund for any fees paid.
- 3.3 **Examination Venue**
Examinations are conducted at the venue to be advised at the time of booking for the examination.
- 3.4 **Invigilator and his/her Responsibilities**
- 3.4.1 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 aviation knowledge test must positively identify each applicant, ensure proper test authorization is presented, and ensure proper completion of the test center requirements.
- 3.4.2 The invigilator shall not administer a test to an applicant who does not have satisfactory documentation of test authorization, as is required by regulation ACAR Part 2.2.5.5.
- 3.4.3 The invigilator will provide each applicant with:
- a) A set of instructions for taking the test either by computer or in paper format depending on the capability of the PEL Office;
 - b) The required supplementary materials free of extraneous marks; and
 - c) An accountable number of sheets of scratch paper;



- 3.4.4 Inspect the aid(s) the applicant plans to use during the test to ensure that they meet the guidelines issued;
- 3.4.5 Ensure that the proper examination is available;
- 3.4.6 Answer applicant's questions regarding the proper use of equipment;
- 3.4.7 Monitor all activities in the examination room and be alert for any misconduct;
- 3.4.8 Collect printed examinations, handouts and scratch paper at the close of the examination; and
- 3.4.9 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.

3.5 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 should use terms such as "start now" and "finish now", "no more writing please" and must require that these instructions be obeyed.

3.6 Applicant 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.

3.7 Examination Passing Grades

- 3.7.1 In order to qualify, candidates must obtain not less than 75% of the possible marks for each license or certificate.
- 3.7.2 The examination passing grades are as follows:
 - a) Private Pilot License Subjects
 - (i) Air law
 - (ii) Aircraft general knowledge
 - (iii) Flight performance and planning
 - (iv) Human performance
 - (v) Meteorology
 - (vi) Navigation
 - (vii) Operation procedures
 - (viii) Principles of flight



(ix) Radiotelephony.

Pass Mark is 75%

b) Commercial Pilot License Subjects

- (i) Air law
- (ii) Aircraft general knowledge
- (iii) Flight performance, planning and loading
- (iv) Human performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operation procedures
- (viii) Principles of flight
- (ix) Radiotelephony

Pass Mark is 75%

c) Airline Transport License Subjects

- (i) Air law
- (ii) Aircraft general knowledge
- (iii) Flight performance and planning
- (iv) Meteorology
- (v) Navigation
- (vi) Operation procedures
- (vii) Principles of flight
- (viii) Radiotelephony

Pass Mark is 75%

d) Flight Instructor License Subjects

- (i) Techniques of applied instruction
- (ii) Assessment of student performance in those subjects in which ground instruction is given
- (iii) The learning process
- (iv) Elements of effective teaching
- (v) Student evaluation and testing, training philosophies
- (vi) Training program development
- (vii) Lesson planning
- (viii) Classroom instructional techniques
- (ix) Use of training aids



- (x) Analysis and correction of student errors
- (xi) Human performance relevant to flight instruction;
- (xii) Hazards involved in simulating system failures and malfunctions in the air
- (xiii) Principles of threat and error management.

Overall Pass Mark is 75%

e) Ground Instructor License Subjects

In addition to passing the CPL/ATPL knowledge examination as applicable, the applicant shall be required to pass an examination on the following subjects:

- (i) Techniques of applied instruction
- (ii) Assessment of student performance in those subjects in which ground instruction is given
- (iii) The learning process
- (iv) Elements of effective teaching
- (v) Student evaluation and testing, training philosophies
- (vi) Training program development
- (vii) Lesson planning
- (viii) Classroom instructional techniques
- (ix) Use of training aids
- (x) Analysis and correction of student errors
- (xi) Human performance relevant to flight instruction
- (xii) Hazards involved in simulating system failures and malfunctions in the air
- (xiii) Principles of threat and error management.

Overall Pass Mark is 75%

f) Flight Engineer License Subjects

- (i) Air law
- (ii) Aircraft general knowledge
- (iii) Flight performance and planning
- (iv) Human performance
- (v) Operational procedures
- (vi) Principles of flight
- (vii) Radiotelephony
- (viii) Navigation
- (ix) Meteorology

Overall Pass Mark is 75%

g) Flight Navigator License



- (i) Air law
- (ii) Flight performance and planning
- (iii) Human performance
- (iv) Meteorology
- (v) Navigation
- (vi) Operational procedures
- (vii) Principles of flight
- (viii) Radiotelephony

Overall Pass Mark is 75%

h) Air Traffic Controller License Subjects

- (i) Air law
- (ii) Air traffic control equipment
- (iii) General knowledge
- (iv) Human performance
- (v) Meteorology
- (vi) Navigation
- (vii) Operational procedures

Overall Pass Mark is 75%

i) Aeronautical Station Operator License Subjects

- (i) General Knowledge. Air traffic services provided within Afghanistan
- (ii) Operational Procedures. Radiotelephony procedures; phraseology; telecommunication
- (iii) Rules and regulations. Rules and regulations applicable to the aeronautical station operator
- (iv) Telecommunication equipment. Principles, use and limitations of telecommunication equipment in an aeronautical station

Overall Pass Mark is 75%

j) Air Traffic Safety Electronic Personnel License Subjects

- (i) General Science
- (ii) CNS/ATM operational environment
- (iii) CNS/ATM technical environment
- (iv) Principles of flight and air navigation
- (v) Aircraft Engineering
- (vi) Human Performance and Limitations
- (vii) Law and Regulations



(viii) ICAO Annexes

Overall Pass Mark is 75%

k) Aviation Maintenance Technician License Subjects

- (i) Air law and airworthiness requirements
- (ii) Natural science and aircraft general knowledge
- (iii) Aircraft engineering
- (iv) Aircraft maintenance
- (v) Human performance

Overall Pass Mark is 75%

l) Flight Operations Officer License 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) Radio communication

Overall Pass Mark is 75%

m) Senior Parachute Rigger License Subjects

- (i) Construction, packing, and maintenance
- (ii) The manufacturer's instructions
- (iii) The regulations of Subpart 2.10 of the ACARs

Overall Pass Mark is 75%

n) Master Parachute Rigger License Subjects

- (i) Construction, packing, and maintenance
- (ii) The manufacturer's instructions
- (iii) The regulations of Subpart 2.10 of the ACARs

Overall Pass Mark is 75%

o) Flight Radiotelephone Operator License Subjects

- (i) general radio regulations annexed to the International Telecommunication Convention
- (ii) requirements pertinent to the operation of the radiotelephone on board an aircraft
- (iii) requirements on radiotelephony procedures and phraseology



Overall Pass Mark is 75%

- p) Flight Navigator Examiner Designation Subjects
 - (i) areas appropriate to the license rating for which designation is sought (s.a.)

Overall Pass Mark is 75%

- q) Instrument Rating Subjects
 - (i) Air law
 - (ii) Aircraft general knowledge
 - (iii) Flight performance and planning
 - (iv) Human performance
 - (v) Meteorology
 - (vi) Navigation
 - (vii) Operation procedures
 - (viii) Radiotelephony

Overall Pass Mark is 75%

- r) Airframe Rating Subjects
 - (i) Wood structures
 - (ii) Aircraft covering
 - (iii) Aircraft finishes
 - (iv) Sheet metal and non-metallic structures
 - (v) Welding
 - (vi) Assembly and rigging
 - (vii) Airframe inspection
 - (viii) Fuel systems
 - (ix) Aircraft landing gear systems
 - (x) Hydraulic and pneumatic power systems
 - (xi) Cabin atmosphere control systems
 - (xii) Aircraft instrument systems
 - (xiii) Communication and navigation systems
 - (xiv) Aircraft fuel systems
 - (xv) Aircraft electrical systems
 - (xvi) Position and warning systems
 - (xvii) Ice and rain control systems
 - (xviii) Fire protection systems

Overall Pass Mark is 75%



- s) Powerplant Rating Subjects
 - (i) Reciprocating systems
 - (ii) Turbine engines
 - (iii) Engine inspection
 - (iv) Engine instrument systems
 - (v) Engine fire protection systems
 - (vi) Engine electrical systems
 - (vii) Lubrication systems
 - (viii) Ignition and starting systems
 - (ix) Fuel metering
 - (x) Engine fuel systems
 - (xi) Induction and engine airflow systems
 - (xii) Engine cooling systems
 - (xiii) Engine exhaust and reverser systems
 - (xiv) Propellers
 - (xv) Auxiliary power units

Overall Pass Mark is 75%

- t) Avionics Rating Subjects
 - (i) Aircraft electrical systems
 - (ii) Aircraft instrument systems
 - (iii) Automatic flight control systems;
 - (iv) Aircraft radio and radio navigation systems
 - (v) Aircraft navigation systems
 - (vi) Aircraft systems/components – avionics

Overall Pass Mark is 75%

- u) Air Traffic Controller Rating Subjects
 - Aerodrome control rating
 - (i) Aerodrome layout, physical characteristics and visual aids
 - (ii) Airspace structure
 - (iii) Applicable rules, procedures and source of information
 - (iv) Air navigation facilities
 - (v) Air traffic control equipment and its use
 - (vi) Terrain and prominent landmarks
 - (vii) Characteristics of air traffic



- (viii) Weather phenomena
- (ix) Emergency and search and rescue plans
 - Approach control rating, Approach radar control rating, Approach precision radar control rating, Area control rating, Area radar control rating
- (i) Airspace structure
- (x) Applicable rules, procedures and source of information
- (xi) Air navigation facilities
- (xii) Air traffic control equipment and its use
- (xiii) Terrain and prominent landmarks
- (xiv) Characteristics of air traffic and traffic flow
- (xv) Weather phenomena.
- (xvi) (Emergency and search and rescue plans

Overall Pass Mark is 75%

- v) Inspection Authorization
 - (i) Certification procedures for products and parts
 - (ii) Airworthiness standards – aircraft
 - (iii) Airworthiness standards – rotorcraft
 - (iv) Airworthiness directives
 - (v) Maintenance, preventive maintenance, rebuilding, and alteration
 - (vi) Identification and registration marking
 - (vii) Certification – Maintenance licensing
 - (viii) General operating and flight rules
 - (ix) Aircraft weight and balance

Overall Pass Mark is 75%

- w) Cabin Crew License

- (i) Air law
- (ii) Aircraft general knowledge
- (iii) Human performance
- (iv) Operational procedures

Overall Pass Mark is 75%

3.8 Examination Passing Standards

- 3.8.1 Candidates for examinations listed in 3.7 above other than CPL and ATPL applicants 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.

- 3.8.2 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. 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.

3.9 Examination Results

Examination results will be released to the candidates within fourteen (14) working days and not on telephone.

3.10 Attendance at the Examination

- 3.10.1 Candidates should be present at the examination center with proof of identity at least fifteen (15) minutes prior to the scheduled time for the commencement of each examination paper. Candidates may enter the examination room only during the fifteen (15) minutes preceding the start of the examination to prepare examination material. Candidates must not remain in the room after they finish the examination period unless they are taking an examination in the next period.

- 3.10.2 Bags, briefcases, cellular phones, programmable calculators, beepers etc. are NOT PERMITTED in the examination room, but if suitable facilities are not available, such personal belongings may be placed at a designated area of the examination room, under the direction of the invigilating officer.

3.11 Materials for the Examination

- 3.11.1 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:

- a) Extracted pages from the Air Almanac;
- b) Flight planning data sheets and radio navigation charts;
- c) The authority navigation log and flight planning forms will be provided and no any other may be used.

- 3.11.2 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.

- 3.11.3 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.

- 3.11.4 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 examinations.
- 3.11.5 Calculators must not be used in such a manner, or be of such a type, as to cause distraction to other candidates.
- 3.11.6 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.
- 3.11.7 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.
- 3.11.8 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.

3.12 Rules to be Applied to the Conduct of Examination

- 3.12.1 All work must be shown in the pro forma 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.
- 3.12.2 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.
- 3.12.3 Silence is to be observed in examination room at all times.
- 3.12.4 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.
- 3.12.5 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.
- 3.12.6 Any candidate who attempts to remove unauthorized examination materials from the room will be liable to disqualification from those examinations, which have been taken.



3.13 Validity of Knowledge Test

The knowledge test is valid for a period as stated in the specific regulation of ACAR Part 2 provisions for each specific type of the license, and the expiry date must be endorsed on the result slip addressed to the candidate.



4 Result

Examination results are issued to the candidate indicating the expiry date.



5 Future activities

Applicant may return to:-

- 5.1** Re-sit the failed or expired examinations; or
- 5.2** To sit for examinations for other licenses or certificates.



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Appendix I

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