

PCAA TECHNICAL EXAMINATIONS FOR THEORETICAL KNOWLEDGE (PERSONNEL LICENCES – PPL, CPL, ATPL, MPL)

AIR NAVIGATION ORDER

VERSION : **2.0**
DATE OF IMPLEMENTATION : **01-06-2024**
OFFICE OF PRIME INTEREST : **Personnel Licensing Directorate**

	NAME	DESIGNATION	SIGNATURE
PREPARED BY	ARIF MUMTAZ	Additional Director Examination	
REVIEWED BY	Air Cdre. (Retd) MUHAMMAD ZIA KHAN	Director Personnel Licensing	
	HASAN MUJAHID	Additional Director State Safety Programme	
	RIZWAN UD-DIN	Officer In charge Legal (REG)	
VERIFIED BY	NADIR SHAFI DAR	Dy. Director General (Regulatory)	
APPROVED BY	SAIF ANJUM	Director General Civil Aviation Authority	
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A. AUTHORITY:

A1. This Air Navigation Order (ANO) is issued by the Director General Civil Aviation Authority in pursuance of powers vested in him under Rule 4(3), 36, 354, 357, 360 and all other enabling provisions of Civil Aviation Rules,1994 (CARs,94).

B. PURPOSE:

B1. The purpose of this ANO is to notify the knowledge requirements for pilot examinations associated with Flight Crew Licences (as described herein) issued by the Personnel Licensing Directorate, PCAA. It also provides (where applicable) regulatory framework and mechanism for the conduct of CAA FCL Technical Theoretical Knowledge Examinations for the issuance of personnel licences of pilots.

C. SCOPE:

C1. This ANO covers the syllabi, referenced learning objectives, rules and procedures governing the PCAA Technical Theoretical Knowledge Examinations required for issuance of licences for Private / Commercial, Airline Transport and Multi-crew Pilots (PPL / CPL / ATPL / MPL for aeroplanes and helicopters) **which are delivered through the electronic examinations (e-Exams) system** of an exam service provider.

C2. This ANO also prescribes the procedures for the enrollment and conduct of examinations (e-Exams).

C3. For other examinations for endorsement of rating and renewals of these licences, please refer to ANO-002-LCXX and other relevant ANOs available on PCAA website.

D. DESCRIPTION:

D1. **CONTEXT**

D1.1 Pakistan Civil Aviation Authority (PCAA) has been entrusted with the responsibility to regulate all aviation activities. Under the framework of Civil Aviation Rules 1994 Part V “Personnel Licences”, it has to issue flight crew and other required personnel licences subject to compliance of the requirements specified in relevant CAA regulations for knowledge, experience and skill. It achieves this by ensuring that applicant has acquired the minimum standards of aeronautical knowledge, experience and skill required to operate safely in the complex aviation environment. Technical Theoretical Knowledge Examinations are required to be passed by each applicant in accordance with the syllabus and procedures provided for relevant licence.

D1.2 Personnel licensing system of PCAA should have quality and integrity not only to promote safety but also to ensure international recognition of the high standard of Pakistani licences. PCAA notify syllabi of training for various licences and ratings to enable applicants to undergo the required training in the industry, and to attain the required minimum standards.

D1.3 PCAA has implemented an examination system (e-Exams) based on Multi-Choice, Cloze, List (Multi-Select), Type in the Answer format questions. Candidates are strongly advised to familiarize themselves thoroughly with the PCAA style of question and associated rules prior to appearing in the examination conducted on this e-Exam system.

D1.4 The time allocated to an examination is based on the need for a well-prepared candidate to answer all the questions. Having completed a course of approved training, the candidate has sole discretion and responsibility in managing the response to the examination questions within allocated examination time.

D2. DETAILS OF TECHNICAL EXAMINATIONS

D2.1. This ANO provides the syllabi for PPL / CPL / MPL / ATPL examinations which are derived from technical theoretical knowledge requirements as contained in ICAO Annex-1 (Appendix – A).

D2.2. The details of Technical Theoretical Knowledge Examinations required for a specific Flight Crew Licence including a breakdown of syllabi, reference to detailed learning objectives, examination structure, number of questions and examination duration for the licensing examination as per details given below:

S. No.	Licence / Rating / Certificate	Appendix
1.	Private Pilot Licence: Aeroplane & Helicopter	B
2.	Commercial Pilot Licence: Aeroplane & Helicopter	C
3.	Airline Transport Pilot Licence: Aeroplane & Helicopter	C
4.	Multi-Crew Pilot Licence: Aeroplane	C

D2.3. In addition to the syllabi, each Appendix to this ANO provides a weblink to the detailed learning objectives (LOs) relevant to the licensing examination. These LOs inform the structure and depth of knowledge requirements for the purpose of teaching and learning.

D2.4. PCAA e-Exams are managed by independent PCAA officials including supervisors, and/or PCAA officially appointed examination service provider(s). PCAA Personnel licensing examination administrators process registrations and accept payments.

D2.5. PCAA examinations are invigilated by the PCAA appointed service provider providing the e-Exams system.

D2.6. e-Exams are held only at PCAA approved venue(s). Venue information, including location and schedule, is published in the e-Exams booking system which is accessible to all Flight Crew Examination candidates and Approved Training Organizations (ATOs) registered in e-exam system. All such examinations shall be under the supervision of the e-Exams service provider appointed by the PCAA to act on behalf of the PCAA.

D3. GENERAL CONSIDERATIONS – PAPER SETTING:

D3.1 All question papers are as per the syllabi provided in the applicable Appendix contained within this ANO. The syllabi are derived from the technical knowledge requirements as specified in ICAO Annex-1 (Appendix – A), based on PCAA requirements and standards, using best practices derived from United Kingdom and European standards and associated applicable documents.

D3.2 All examinations for initial issue of a licence shall be based on the licence type and the subject.

D3.3 The pass marks for PPL, CPL and ATPL (including MPL) theoretical knowledge examinations for Flight Crew Licensing purposes shall be 70%.

D3.4 The e-Exam system will generate a different on-screen question paper for each candidate to ensure that no two candidates will sit an identical examination, and that in the event of candidates re-sitting exams, they are not presented with the same examination content.

D4. REGISTERING TO SIT EXAMS

D4.1 Candidates wishing to sit PCAA FCL Technical Theoretical Knowledge Examinations will be required to register for the e-Exams service.

D4.2 Candidates can register for a secure e-Exams portal account via the PCAA website at

PCAA | Pakistan Civil Aviation Authority (caapakistan.com.pk)

D4.3 To register for e-Exams, candidates are required to provide personal details including permanent address; full name; date of birth; telephone number, email address as well as creating a secure password and providing details of the Photographic Identification (ID) document that they will be bringing to the examination. Candidates will also be required to select their approved training organization (ATO) unless they are exempted from training.

Specifying ATO / Eligibility to Sit Examinations

D4.4 Candidates may be eligible to take an e-Exam subject to meeting the minimum training requirements specified by the PCAA and according to the PCAA ATO approval(s) valid and held by the Training Organization.

D4.5 The candidate is required to specify the ATO he/she is training with by selecting from the drop-down list presented in the e-Exams system, the nominated administrator at the ATO will then be asked to accept the candidate. This process establishes a 'membership' between the candidate and the ATO, enabling the nominated administrator at the ATO to have sight of the candidate's bookings and results to that ATO. ATO's administrators must sign off and authorize candidates to sit examinations, confirming that the candidate has received the required approved training applicable to the licence, and the ATO will receive a system notification when a member candidate makes a booking. An ATO administrator may request PCAA to cancel bookings made by a candidate if the candidate has not received the required training. This will result in a loss of the examination fee(s).

D4.6 For a candidate who is exempt from the requirement of completing approved training with an ATO, the candidate must contact PCAA PEL Directorate directly for further instructions on email; AdID.Examination@caapakistan.com.pk.

D4.7 Candidates who have been barred / suspended by PCAA from sitting examinations and whose suspension period is not yet completed will not have their e-Exams account approved, or in the case that the account is already created, this account will be suspended.

D4.8 If a candidate has been inadvertently permitted to undertake an exam without satisfying the appropriate prequalification requirement(s), this shall be taken as the candidate knowingly appearing in a PCAA exam without qualifying pre-requisite of the exam. PCAA will consider any pass result(s) in such exam(s) as null and void and invalidate such examinations. This will result in a loss of the examination fee(s).

Photographic Identification (ID) Requirements

D4.9 Candidates are required to specify during e-Exam registration which personal photographic identification document they will present at the e-Exam venue. This ID will be verified by the PCAA and shall be recorded for checking by the examination invigilator each time a candidate undertakes an examination. The candidate must present this specific ID (which must be current and the original) at the examination venue for each examination. Failure to do so will result in the candidate being unable to sit the examination. Acceptable ID Documents are as given below:

- Computerized National Identity Card (CNIC) issued by NADRA
- NICOP (National Identity Card for Overseas Pakistani)
- Passport (for foreign nationals)

Candidates shall contact the PCAA PEL Directorate should their ID expire or become invalid, necessitating the need to update e-Exams systems ID records.

D4.10 Once the candidate provides the required identity information and specifies the ATO, the ATO membership request will be initiated and the PCAA Examinations Administrator will complete the final validation stage for service access to be enabled. Candidates (and ATO's where applicable) will then be able to access the service. Candidates shall e-mail to PCAA administrator for approval of their registration forwarding their details at following address:

FCLExam.Admin@caapakistan.com.pk

D4.11 Successful completion of the registration will result in a system generated notification being emailed to the candidate advising that they have registered but will not be able to make exam bookings until verified as eligible to sit by PCAA and the selected ATO.

D4.12 PCAA will endeavour to process candidate registrations within 5 clear working days for standard cases. However, the process may be extended for more complex cases and where

eligibility to sit exams needs to be investigated. PCAA reserves the right to restrict or deny access to the e-Exams platform at its sole discretion at any time.

D5. PAYMENT AND BOOKING PROCEDURE

D5.1 Candidates will receive a system generated notification once PCAA have verified and approved their details, thus enabling bookings to be made for FCL technical theoretical knowledge examinations.

D5.2 Provisional bookings for examination(s) can then be made via the Candidate portal and will be held with a ''Penciled' status pending receipt of payment to PCAA.

D5.3 For applicable examination fee and instructions on payment by the candidates should refer to PCAA publication ASC-004-LCXX "Flight Crew Licence Examination charges and Payment procedure".

D5.4 Once payment is received and receipted, examination bookings will be confirmed, and candidates will receive an email containing their booking confirmation. An electronic copy will also be held in their e-Exams portal account, they can also view the booking status which will change from "Penciled" to ''Booked'' when booking is confirmed.

D5.5 Examination bookings will automatically be cancelled if payment is not received and accepted by CAA within 7 calendar days of booking or by 72 hours prior to the first examination in the sitting period (whichever comes first). A 'sitting period' is a period of examinations as determined by the PCAA, which may be one or more consecutive days of scheduled e-Exams.

D5.6 Candidates should make allowance for the time it takes for cleared payment to be received by PCAA to ensure that bookings can be administered and confirmed in a timely manner for the required e-Exam sitting date. Please refer below to the specific deadline for bookings / amendments / cancellations prior to an e-Exams sitting date.

D5.7 Amendments to booked examinations, including transfers and cancellations, are managed by PCAA through the e-Exams system. Amendments will be subject to Terms and Conditions and relevant charges.

D5.8 The ATO is notified when one of their membership candidates makes a booking. In the case that the ATO does not agree that the candidate has satisfactory knowledge to complete the examination, the ATO shall request PCAA to cancel the booking.

D5.9 Examination bookings (subject to Terms and Conditions, including changes) will be accepted up to 7 days before the exam date after which examination sessions will be closed for any further bookings or changes.

D5.10 After confirmation of booking, the candidate must appear for the e-Exam at the time specified unless the booking is cancelled in accordance with PCAA Terms and Conditions. Not appearing in any examination will be considered as 'Did Not Sit'. The examination will not be treated as an attempt but the fee submitted will be forfeited /non-refundable.

D5.11 In exceptional circumstances, to be approved case-by-case by PCAA, a 'Did Not Sit' may be considered for rebooking of the examination which shall be facilitated by PCAA to allow the appropriate fee waiver. The attempt will only apply to the rescheduled examination and not the examination that was not sat.

Transfer and Cancellation fee

D5.12 Provisional examination bookings can be cancelled without penalty if no payment has been received and receipted by PCAA and the exam booking is showing ''Penciled'' status in the candidate portal.

D5.13 Once payment has been made for the booking and the status is showing ''Booked'', cancellations / transfers can be made subject to Terms and Conditions in table below. All

times and dates for actions are based on the local time zone, calendar days and the session start time where the examination is being held.

Action	PKR	Rules
Transfers	Free of Charge	Up to seven (7) calendar days before the first scheduled e-Exam in a sitting period.
	Full loss of fee paid	Within seven (7) calendar days before the first scheduled e-Exam in a sitting period. Transfer requests within the same siting period may be entertained free of charge subject to availibility of slots.
Cancellations	Free of charge	After booking and up to seven (7) calendar days before the first scheduled e-Exam in a sitting period.
	Full loss of fee paid	Within seven (7) calendar days before the first scheduled e-Exam in a sitting period.
Did Not Sit (DNS)	Full loss of fee paid	DNSs are fully chargeable*.

* Please contact the PCAA Examinations Administration Team if you have a medical certificate or compassionate reasons for not attending.

D5.14 Any amendment to bookings within the seven (7) calendar days prior to the first scheduled e-Exam in a sitting period can only be made by special request to PCAA.

D5.15 Examination sitings are normally closed 72 hours prior to the first exam in a siting period. Once a siting is closed, no transfer / cancellation request shall be accepted even with loss of fee and candidate will be marked as “Did Not Sit” for his absence.

D6. EXAMINATION VALIDITY & THEORETICAL KNOWLEDGE CREDIT

D6.1 All credits (successful examination pass results) awarded by PCAA for an FCL examination (PPL, CPL – in accordance with the Appendices to this ANO) shall be valid for a period of twenty-four (24) months for PPL, thirty-six (36) months for CPL and 60 months for ATPL and MPL from the date of the last pass mark received by the candidate to complete all technical theoretical knowledge examinations required for the licence sought.

D6.2 An applicant having passed the theoretical knowledge examination for higher licence shall be credited knowledge requirement of lower category of theoretical examinations for the purpose of issuance of lower category of licence.

D6.3 Candidates who have already passed theoretical knowledge examinations for the issue of higher Flight Crew Licence, credit availed for Revalidation (Air Law & Ops Procedures) Exam for any licence, as long as it is within the validity period specified.

D6.4 Credit for theoretical knowledge examinations may be granted to qualified and experienced personnel from the Pakistan Armed Forces. Candidates that believe they are exempt should contact the PCAA PEL Directorate for further instructions and verification.

D7. CONDUCT OF PCAA TECHNICAL THEORETICAL KNOWLEDGE e-EXAMS:

D7.1 Candidates sitting in the same exam session can be sitting different exam licences and subjects, they may have different requirements and exam durations depending on the examination they are taking.

D7.2 All e-Exams are conducted in a secure and invigilated environment. Candidates will be greeted by the Lead Invigilator on the day of sitting, be requested to provide their previously nominated original photographic ID to verify their eligibility to sit, before being seated.

D7.3 All examinations desks are equipped with a monitor, keyboard and a mouse ready for the e-Exam to commence.

D7.4 A verbal briefing will be delivered to all candidates by the Invigilator and candidates will be asked to read and accept (by signing) the examinations conditions presented in an e-Examinations Candidate login form available on each candidate's designated desk. Examinations will be invalidated if a candidate fails to sign the login form.

D7.5 Candidates will have received in their booking confirmation a list of permitted, prohibited and supplied materials for the specific examination subject being sat. Only permitted or supplied materials will be available for use, no other items are permitted in the exam room.

D7.6 Candidates will be instructed by the invigilator to commence the examinations by entering their login details and clicking the 'start' button when instructed. The examination will then continue until the duration is completed or the examination is ceased early by the candidate.

D7.7 When an examination is completed by the candidate, they will be required to raise their hand to attract the attention of the Invigilator who will then finalize (including collecting supplied materials) the examination to permit the candidate to leave.

D7.8 The following is strictly prohibited:

i. Candidates using any items not described in the permitted or supplied materials list.

ii. Any mobile phone, communications device, storage device, electronic or otherwise.

iii. Any video imaging or audio recording devices.

iv. The removal of any exam materials from the exam room

v. Offensive or aggressive behaviour towards any examinations personnel.

D7.9 The examination venue is installed with Closed Circuit Television Cameras (CCTV) which will monitor all examination events.

D7.10 Candidates are required to observe the terms and conditions of examinations conduct, including all Invigilator instructions, at all times. Failure to do so will result in sanctions being applied to the candidates for misconduct.

D7.11 Smoking and visiting toilets during the paper is not permitted.

D7.12 Restrictions may apply in addition to the above, in the event of Public Health and/or related country restrictions.

D8. EXAMINATION RESULTS AND KNOWLEDGE DEFICIENCY REPORTS:

D8.1 Results shall be released to the candidate on a date/time determined at the sole discretion of the PCAA PEL Directorate. As a general rule, this will be at the end of the examination.

D8.2 Results may be delayed in release where PCAA is required to review any conduct or misconduct issues pertaining to a candidate (or candidates) or conditions of examination delivery.

D8.3 Results and Knowledge Deficiency Reports (KDRs) will be available in the E-Exams Candidate portal (and organization Portal for an ATO with whom the candidate has an approved membership). An email notification will be sent to the candidate (and ATO where a membership relationship exists) to advise once the results are available. The candidate will receive a separate result notification for each examination they have completed.

D8.4 The KDR for a PPL, CPL, or ATPL (including for MPL) Flight Crew examination is issued with the result advice for a completed examination and lists the syllabus items the candidate has not answered correctly.

D8.5 The KDR information provides the candidates and ATO with a rapid means of identifying the syllabus item for re-studying and re-testing. A candidate who obtains a 100% score in a PCAA examination will not have any syllabus item on the KDR. Similarly, a candidate who

scores 50% or less will also not receive any specific syllabus items on the KDR. PCAA considers a candidate who fails to achieve at least 51% as not being sufficiently trained nor prepared for the examination attempt. Such a performance requires a complete re-visit of the entire syllabus for the subject if re-training is contemplated. Therefore, a candidate who fails to achieve at least 51% in a PCAA examination shall restudy the entire syllabus prior to any resit.

D9. **RE-TRAINING PERIODS AND EXAM RESITS**

D9.1 If a candidate has failed to pass all Technical Theoretical Knowledge Examinations for the licence sought within an eighteen (18) month period from the end of calendar month when the candidate first attempted an examination, all results for that licence shall be rendered failed and the candidate shall re-take the complete set of examinations for the licence after completing appropriate (to the satisfaction of the ATO and PCAA) additional re-training. The DGCAA may, in specific cases with justified reasons, grant extension for a period extending upto 03 months to CPL and ATPL candidates provided they have left with three (03) or less exams.

D9.2 Candidates shall pass any subject for the Licence sought within six (6) examination attempts. Should a candidate fail on a fourth attempt, the candidate will be blocked from booking the failed examination(s) for sixty (60) - days to enable the candidate to receive appropriate additional training before being permitted a maximum of two (2) further attempts to pass the previously failed examination(s). Director Personnel Licencing may curtail this Standdown period on candidates request if candidate(s) satisfy about their preparation of relevant exam. If a candidate fails the examination(s) on the sixth attempt, all results for that licence shall be rendered failed and the candidate shall re-take the complete set of examinations for the licence after completing appropriate (to the satisfaction of the ATO and PCAA) re-training.

D9.3 The ‘stand down’ period(s) limits and further attempts must be completed within the 18 months from the date of the first examination, **as in 9.1 above**.

D9.4 A failed examination attempt indicates the candidate has a significant knowledge deficiency on the subject tested. This is a safety-related issue, which must be addressed by the candidate prior to re-attempting the failed exam. Candidates will be provided with a result notification that will provide a statement of the candidate’s knowledge deficiency.

D9.5 Examination failures, especially repetitive failures on the same subject, would generally be a consequence of inadequate re-training or/and the candidate’s personal difficulties in attaining the required standards.

D9.6 Following any examination failures, there must be a period of re-training time to ensure the candidate has a reasonable chance of reaching the required standards to pass the PCAA exam. Before re-taking the examinations, the candidate shall undertake further training at their designated ATO. The extent and scope of the training needed shall be determined by the ATO based on the needs of the candidate and according to any specific guidance outlined by the PCAA.

D9.7 There are no specific rules for what constitutes appropriate re-training as the remedial training a candidate will require may vary from individual to individual. PCAA trust that theory providers conducting remedial training will have a responsible approach, knowing that candidates have already failed this particular subject on multiple occasions.

D9.8 As a minimum, PCAA would expect the theory provider to:

- ❖ Go through each of the items mentioned in training programme which is required for that subject;
- ❖ Verify that the individual has an adequate understanding of other key elements within that particular subject, particularly those which are safety related.

D9.9 In most cases, this would not require the candidate to re-sit a complete classroom course as though they had never studied for that subject, unless the candidate fails to complete all examinations for the licence sought within eighteen (18) months (as specified in D9.1 above).

Evidence from a Theory Provider or CFI

D9.10 A record of re-training, including the following information, must be retained by the training provider / ATO in the candidate training record for PCAA PEL Directorate audit and oversight inspection purposes:

a. The name and reference number of candidate;

b. The subject name for which the training was provided;

c. A statement or description about the training that they have received, i.e. what training did they complete, progress examinations, private tuition, review of their items, etc; and the name of the person/organization who conducted the training.

Note: Candidate should realize that this procedure must be repeated for each subsequent failure(s) as given in this ANO.

D9.11 Candidates and ATOs are reminded that initial training and (where required) re-training will be subject to review by the PCAA at any point during the examination and licensing process, and during ATO oversight audits, to ensure the minimum mandated requirements are adhered to. Any failure to comply with these requirements may result in the nullification of examination results, revocation of approval / licence and potential enforcement action.

D10. CANDIDATES REQUEST FOR REVIEW

D10.1 A candidate can request a Full Review which is a comprehensive investigation into the accuracy and integrity of examination content and materials delivered to the candidate during a specific test.

D10.2 Candidates must formally request a "Review" by emailing the request to AdID.Examination@caapakistan.com.pk providing the detail of paper to be reviewed.

D10.3 The review fee should be paid to PCAA by the candidate at the time of request in accordance with PCAA publication ASC-004-LCXX "Flight Crew Licence Examination charges and Payment procedure".

D10.4 Review must be requested within 14 calendar days of the date of taking the examination in question.

D10.5 The examination review fee is fully refundable if an error is found, and the candidate marks are adjusted accordingly.

D10.6 This service is expected to be completed within 10 workings days of receipt of the request. A message notification, explaining the findings and closing actions will be added to the 'User Messages' area in the candidate portal.

D10.7 Candidates are also able to make comments against questions during an examination. Entering a comment during the examination does not constitute a Full Review but comments are reviewed by the e-Exams Subject Matter Experts (SMEs). Feedback is used to maintain the integrity and effectiveness of the examination content and will be reviewed should a candidate request a full technical review.

D11. PENALTIES FOR USING UNFAIR MEANS:

D11.1 Penalties resulting from improper conduct / using unfair means or cheating will be determined by the PCAA PEL Directorate in consultation with the PCAA Legal branch. Penalties as given in the Enforcement Manual and PCAA Policies shall be levied if it is ascertained that the candidate is guilty of using unfair means. Penalties maybe time barring, monetary or both. A written report of the incident along with the penalty levied on the candidate will be sent to the ATO / Operator who had initially forwarded the candidate's name for the examination.

D11.2 The material used in cheating / improper conduct e.g., mobile phones, books, written material or any other electronic gadget will be confiscated and if required will be produced as evidence the time of enquiry.

E. EVIDENCES(ACRONYMS/RECORDS/REFERENCES):

E1. **ACRONYMS / ABBREVIATIONS:**

E1.1	ANO	Air Navigation Order
E1.2	ASC	Air Safety Circular
E1.3	ATO	Approved Training Organization
E1.4	ATPL	Airline Transport Pilot Licence
E1.5	CFI	Chief Flight Instructor
E1.6	CNIC	Computerized National Identity Card
E1.7	CPL	Commercial Pilot licence
E1.8	DOC	Document
E1.9	FCL	Flight Crew Licence
E1.10	ICAO	International Civil Aviation Organization
E1.11	KDR	Knowledge Deficiency Report
E1.12	MPL	Multi-crew Pilot Licence
E1.13	NADRA	National Database and Registration Authority
E1.14	NICOP	National Identity Card for Overseas Pakistanis
E1.15	PPL	Private Pilot Licence

E2. **RECORDS:**

E1.1 Nil

E3. **REFERENCES:**

E3.1	CAA Technical Exams (Personnel Licences, Ratings & Certificates)	**(ANO-002-LCXX-3.0)**
E3.2	Civil Aviation Rules	**(CARs-1994)**
E3.3	Personnel Licensing	**(ICAO Annex-1)**
E3.4	CAA Personnel Licensing Fee Schedule	**(ANO-021-LCXX)**

IMPLEMENTATION

This Air Navigation Order shall be implemented with effect from **1st June, 2024**.

(SAIF ANJUM)
Director General,
Pakistan Civil Aviation Authority

Dated: 31st May, 2024

(CAPT. MUHAMMAD ZIA KHAN)
Air Cdre. (Retd.)
Director Personnel Licensing

Dated: 31st May, 2024

File: HQCAA/1136/296/LCXX

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APPENDIX "A" – ICAO ANNEX 1 TECHNICAL KNOWLEDGE REQUIREMENTS

1. PRIVATE PILOT LICENCE (PPL)

1.1. Air law

Rules and regulations relevant to the holder of a private pilot licence; rules of the air; altimeter setting procedures; appropriate air traffic services practices and procedures;

1.2. Human performance

Human performance including principles of TEM;

Note. — Guidance material to design training programmes on human performance, including TEM, can be found in the Human Factors Training Manual (Doc 9683).

1.3. Meteorology

Application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry; hazardous weather conditions;

1.4. Navigation

Practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

1.5. Radiotelephony

Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

1.6. Aircraft general knowledge for aeroplanes and helicopters

a) principles of operation and functioning of engines, systems and instruments;

b) operating limitations of the relevant category of aircraft and engines; relevant operational information from the flight manual or other appropriate document;

c) for helicopters, transmission (power trains) where applicable;

1.7. Flight performance, planning and loading

a) effects of loading and mass distribution on flight characteristics; mass and balance calculations;

b) use and practical application of take-off, landing and other performance data;

c) pre-flight and en-route flight planning appropriate to private operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; position reporting procedures; altimeter setting procedures; operations in areas of high-density traffic;

1.8. Operational procedures

a) application of TEM to operational performance;

Note:- Guidance material on the application of threat and error management (TEM) is found in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868), Part II, Section I in Chapter 6, and in the Human Factors Training Manual (Doc 9683).

b) altimeter setting procedures;

c) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

d) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;

e) in the case of helicopters, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

1.9. Principles of Flight

Principles of flight.

2. COMMERCIAL PILOT LICENCE (CPL)

2.1 Air law

Rules and regulations relevant to the holder of a commercial pilot licence; rules of the air; appropriate air traffic services practices and procedures;

2.2 Human performance

Human performance including principles of TEM;

Note. — Guidance material to design training programmes on human performance, including TEM, can be found in the Human Factors Training Manual (Doc 9683).

2.3 Meteorology

d) interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;

e) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;

f) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

2.4 Navigation

a) air navigation, including the use of aeronautical charts, instruments and navigation aids; an understanding of the principles and characteristics of appropriate navigation systems; operation of airborne equipment;

2.5 Radiotelephony

Communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure.

2.6 Aircraft general knowledge for aeroplanes and helicopters

a) principles of operation and functioning of engines, systems and instruments;

b) operating limitations of the relevant category of aircraft and engines; relevant operational information from the flight manual or other appropriate document;

c) use and serviceability checks of equipment and systems of appropriate aircraft;

d) maintenance procedures for airframes, systems and engines of appropriate aircraft;

e) for helicopters and transmission (power trains) where applicable;

2.7 Flight performance, planning and loading

a) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;

b) use and practical application of take-off, landing and other performance data;

c) pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

d) in the case of helicopters, effects of external loading on handling;

2.8 Operational procedures

a) application of TEM to operational performance;

b) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

c) altimeter setting procedures;

d) appropriate precautionary and emergency procedures;

e) operational procedures for carriage of freight; potential hazards associated with dangerous goods;

f) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;

g) in the case of helicopters, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

2.9 **Principles of flight**

Principles of flight.

3. MULTI-CREW PILOT LICENCE

3.1 The applicant shall at least have met the requirements specified in the airline transport pilot licence appropriate to the aeroplane category in an approved training course as well as the additional requirements underpinning the approved adapted competency model. Training in the underpinning knowledge requirements shall be fully integrated with the training of the underpinning skill requirements.

4. AIRLINE TRANSPORT PILOT LICENCE (ATPL)

4.1 **Air law**

Rules and regulations relevant to the holder of an airline transport pilot licence; rules of the air; appropriate air traffic services practices and procedures;

4.2 **Human performance**

Human performance including principles of TEM;

Note. — Guidance material to design training programmes on human performance, including TEM, can be found in the Human Factors Training Manual (Doc 9683).

4.3 **Meteorology**

a) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;

b) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;

c) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

d) in the case of aeroplanes, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts; jet streams;

4.4 **Navigation**

a) air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;

b) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;

c) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;

d) principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment;

4.5 **Radiotelephony**

Communication procedures and phraseology; action to be taken in case of communication failure.

4.6 **Aircraft general knowledge for aeroplanes and helicopters**

a) general characteristics and limitations of electrical, hydraulic, pressurization and other aircraft systems; flight control systems, including autopilot and stability augmentation;

b) principles of operation, handling procedures and operating limitations of aircraft engines; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;

c) operating procedures and limitations of the relevant category of aircraft; effects of atmospheric conditions on aircraft performance in accordance with the relevant operational information from the flight manual;

d) use and serviceability checks of equipment and systems of appropriate aircraft;

e) flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments and electronic display units;

f) maintenance procedures for airframes, systems and engines of appropriate aircraft;

g) for helicopters, transmission (power trains) where applicable;

4.7 **Flight performance, planning and loading**

a) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;

b) use and practical application of take-off, landing and other performance data, including procedures for cruise control;

c) pre-flight and en-route operational flight planning; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;

d) in the case of helicopters, effects of external loading on handling;

4.8 **Operational procedures**

a) application of TEM to operational performance;

b) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;

c) precautionary and emergency procedures; safety practices;

d) operational procedures for carriage of freight and dangerous goods;

e) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft; operational procedures for carriage of freight; potential hazards associated with dangerous goods;

a) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;

b) in the case of helicopters, settling with power; ground resonance; retreating blade stall; dynamic rollover and other operating hazards; safety procedures, associated with flight in VMC;

4.9 **Principles of flight**

Principles of flight.

APPENDIX "B" - PPL (A&H) e-EXAMS SYLLABI

The candidate is required to pass the following papers for theoretical knowledge examinations for the issuance of PPL (A or H).

Code	Subject	PPL (A)	PPL (H)
010	Air Law	✓	✓
020	Aircraft General Knowledge (Airframes / Systems / Power plants / Emergency Equipment / Instrumentation)	✓	✓
030	Flight Planning - Mass & Balance and Performance	✓	✓
040	Human performance	✓	✓
050	Meteorology	✓	✓
060	Navigation	✓	✓
070	Operational procedures	✓	✓
081	Principles of Flight (Aeroplane)	✓	-
082	Principles of Flight (Helicopters)	-	✓
090	Communications	✓	✓

The tables below provide a high-level syllabus overview for each licence category, including exam duration, and total number of questions.

To view the detailed Syllabus and Learning Objectives for each subject, please refer to the PCAA website.

Subject: 010 – PPL AIR LAW AND ATC PROCEDURES			
Theoretical knowledge examination			
Exam duration and total number of questions			
	PPL(A)	**PPL(H)**	**Syllabus area**
Time (hr)	**0:50**	**0:50**	
010 01	x	x	International law: conventions, agreements and organizations
010 02	x	x	ICAO Annex 8: Airworthiness of aircraft
010 03	x	x	ICAO Annex 7: Aircraft nationality and registration
010 04	x	x	ICAO Annex 1: Personnel licensing
010 05	x	x	ICAI Annex 2: Rules of the air
010 06	x	x	Air Navigation Services – Aircraft operations
010 07	x	x	Air Traffic Services and Air Traffic Management
010 08	x	x	ICAO Annex 11: Doc. 4444 air traffic management
010 09	x	x	ICAO Annex 15: Aeronautical information service
010 10	x	x	ICAO Annex 14: Volume 1 and 2: Aerodromes
010 11	x	x	ICAO Annex 12: Search and Rescue
010 12	x	x	ICAO Annex 17: Security
010 13	x	x	ICAO Annex 13: Aircraft accident and incident
01014	x	x	National Law
Total Questions	**16**	**16**	

Subject: 020 – PPL AIRCRAFT GENERAL KNOWLEDGE			
Theoretical knowledge examination			
Exam duration and total number of questions			
	PPL(A)	**PPL(H)**	**Syllabus area**
Time (hr)	**0:50**	**0:50**	
PART 1	**AIRFRAME AND SYSTEMS, ELECTRICS, POWERPLANT AND EMERGENCY EQUIPMENT**		
021 01	x	x	Loads/stresses/fatigue/corrosion /maintenance
021 02	x	x	Airframe
021 03	x	x	Hydromechanics: basic principles
021 04	x	x	Landing gear, wheels, tyres & brakes
021 05		x	Helicopter equipment
021 06	x	x	Flight controls
021 07	x	x	Fuel systems
021 08	x	x	Electrics
021 09	x	x	Piston engines
021 10		x	Turbine engines
021 11		x	Protection & detection Smoke/fire
021 12		x	Rotor design
021 13		x	Rotor heads
021 14		x	Helicopter transmission
021 15		x	Auxiliary systems
021 16		x	Drive shaft and associated installation
021 17		x	Helicopter blades
PART 2	**INSTRUMENTATION**		
022 01	x	x	Instrument and indication systems
022 02	x	x	Measurement of aerodynamic parameters
022 03	x	x	Earth magnetic field
022 04	x	x	Gyroscopic instruments
022 05	x	x	Communication systems
022 06	x	x	Alerting systems and proximity systems
022 07	x	x	Integrated instruments: electronic displays
Total Questions	**16**	**16**	

Subject: 030 – PPL FLIGHT PERFORMANCE AND PLANNING			
Theoretical knowledge examination			
Exam duration and total number of questions			
	PPL(A)	**PPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**1:00**	
PART 1	**MASS AND BALANCE**		
031 01	x	x	Purpose of Mass and balance
031 02	x	x	Loading
031 03	x	x	Mass and balance details of aircraft
031 04	x	x	Determination of CG position
PART 2	**PERFORMANCE**		
032 01	x		General Performance Theory
034 01		x	Performance Helicopters - General
034 02		x	Applicability of airworthiness requirements
034 03		x	Definitions and terminology
PART 3	**FLIGHT PLANNING AND MONITORING**		
033 01	x	x	VFR Navigation plan, Fuel Plan, Fuel calculation
033 02	x	x	Pre-flight preparation
033 03	x	x	ICAO Fuel plan (ATS flight plan)
033 04	x	x	Flight monitoring and in-flight replanning
Total Questions	**12**	**12**	

Subject: 040 – PPL HUMAN PERFORMANCE		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(A&H)	**Syllabus area**
Time (hr)	**0:40**	
040 01	x	Human Factors: Basic concepts
040 02	x	Man and Environment
040 03	x	Health and hygiene
040 04	x	Basic Aviation psychology
040 05	x	Human error and reliability
040 06	x	Decision making
040 07	x	Avoiding and managing errors: cockpit management
040 08	x	Human behaviour
040 09	x	Human overload and underload
Total Questions	**12**	

Subject: 050 – PPL METEOROLOGY		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(A&H)	**Syllabus area**
Time (hr)	**1:05min**	
050 01	x	The atmosphere
050 02	x	ICAO standard atmosphere
050 03	x	Wind
050 04	x	Thermodynamics
050 05	x	Clouds and fog
050 06	x	Precipitation
050 07	x	Air masses and fronts
050 08	x	Pressure systems
050 09	x	Climatology
050 10	x	Flight hazards
050 11	x	Meteorology information
Total Questions	**16**	

Subject: 060 – PPL NAVIGATION		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(A&H)	**Syllabus area**
Time (hr)	**1:00**	
061 01	x	Basics of navigation
061 02	x	Magnetism and compasses
061 03	x	Charts
061 04	x	Dead reckoning navigation
061 05	x	In flight navigation
061 06	x	Flight Log
061 07	x	Radio Navigation
061 08	x	Radio Aids
061 09	x	Radar
061 10	x	GNSS
Total Questions	**12**	

Subject: 070 – PPL OPERATIONAL PROCEDURES			
Theoretical knowledge examination			
Exam duration and total number of questions.			
	PPL(A)	**PPL(H)**	**Syllabus area**
Time (hr)	**0:45**	**0:45**	
070 01	x	x	General requirements
070 02	x	x	Special Operational Procedures and hazards (general aspects)
070 03	x	x	Noise abatement
070 04	x	x	Fire or smoke
070 05	x	x	Windshear and microburst
070 06	x	x	Wake turbulence
070 07	x	x	Emergency and precautionary landings
070 08	x	x	Contaminated runways
070 09		x	Rotor downwash
070 10		x	Operation influence by meteorological conditions
070 11		x	Emergency procedures
Total Questions	**12**	**12**	

Subject: 081 – PPL PRINCIPLES OF FLIGHT (AEROPLANES)		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(A)	**Syllabus area**
Time (hr)	**0:50**	
081 01	x	Subsonic aerodynamics
081 02	x	The two-dimensional airflow about an aerofoil
081 03	x	The coefficients
081 04	x	The three-dimensional airflow round a wing and a fuselage
081 05	x	Drag
081 06	x	The ground effect
081 07	x	Flow separation at increasing angles of attack:
081 08	x	CL augmentation
081 09	x	The boundary layer
081 10	x	Special circumstances
081 11	x	Stability
081 12	x	Methods of achieving balance
081 13	x	Static and dynamic longitudinal stability
081 14	x	Dynamic lateral or directional stability
081 15	x	Control
081 16	x	Pitch control
081 17	x	Yaw control
081 18	x	Aerodynamic balance
081 19	x	Mass & Balance - Reasons to balance: means
081 20	x	Trimming
081 21	x	Limitations
081 22	x	Manoeuvring envelope
081 23	x	Gust envelope
081 24	x	Propellers
081 25	x	Engine failure or engine stop
081 26	x	Moments due to propeller operation
081 27	x	Flight mechanics
Total Questions	**12**	

Subject: 082 – PPL PRINCIPLES OF FLIGHT (HELICOPTERS)		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(H)	**Syllabus area**
Time (hr)	**0:50**	
082 01	x	Subsonic aerodynamics
082 02	x	Transonic and compressibility effects
082 03	x	Rotorcraft types
082 04	x	Main rotor aerodynamics
082 05	x	Main rotor mechanics
082 06	x	Tail rotors
082 07	x	Equilibrium, stability and control
082 08	x	Helicopter performances
Total Questions	**12**	

Subject: 090 – PPL COMMUNICATIONS		
Theoretical knowledge examination		
Exam duration and total number of questions		
	PPL(A&H)	**Syllabus area**
Time (hr)	**0:35**	
091 01	x	Definitions
091 02	x	General operating procedures
091 03	x	Weather information terms (VFR)
091 04	x	Action required to be taken in case of communication failure
091 05	x	General principles of VFR propagation and allocation of frequencies
Total Questions	**12**	

APPENDIX "C" -- CPL, MPL, ATPL (A&H) e-EXAMS SYLLABI

The candidate is required to pass following papers for theoretical knowledge examination for issuance of CPL / MPL / ATPL.

Code		CPL (A)	CPL (H)	MPL / ATPL (A)	ATPL (H)/IR
010	Air Law	✓	✓	✓	✓
021	Aircraft General Knowledge – Airframes /Systems / Power plants	✓	✓	✓	✓
022	Aircraft General Knowledge – Instrumentation	✓	✓	✓	✓
031	Flight Performance & Planning - Mass & Balance	✓	✓	✓	✓
032	Flight Performance & Planning – Performance (A)	✓	-	✓	-
033	Flight Performance & Planning – Flight Planning & Monitoring	✓	✓	✓	✓
034	Flight Performance & Planning – Performance (H)	-	✓	-	✓
040	Human performance	✓	✓	✓	✓
050	Meteorology	✓	✓	✓	✓
061	General Navigation	✓	✓	✓	✓
062	Radio Navigation	✓	✓	✓	✓
071	Operational Procedures	✓	✓	✓	✓
081	Principles of Flight (A)	✓	-	✓	-
082	Principles of Flight (H)	-	✓	-	✓
091	VFR Communications	✓	✓	✓	✓
092	IFR Communication	-	-	✓	✓

The tables below provide a high-level syllabus overview for each licence category, including exam duration, distribution of questions and total number of questions.

PLEASE NOTE:
Multi Pilot Licence (MPL)
In accordance with ICAO Annex 1 and PCAA requirements, the applicant for an MPL shall at least have met the theoretical knowledge requirements specified in the airline transport pilot licence appropriate to the aeroplane category in an approved training course as well as the additional requirements underpinning the approved adapted competency model. Training in the underpinning knowledge requirements shall be fully integrated with the training of the underpinning skill requirements.

To view the detailed Syllabus and Learning Objectives for each subject PLEASE REFER TO THE PCAA WEBSITE

Subject: 010 – AIR LAW – PCAA National Variations to be checked					
Theoretical knowledge examination					
Exam duration , total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**0:45**	**1:00**	**0:45**	
Distribution of questions with regard to the topics of the syllabus					
010 01	02	01	02	01	International law: conventions, agreements and organizations
010 02	01	01	01	01	Airworthiness of aircraft
010 03	01	01	01	01	Aircraft nationality
010 04	02	02	02	02	Personnel licensing
010 05	09	08	09	08	Rules of the air
010 06	07	04	07	04	Air Navigation Services – Aircraft operations
010 07	08	06	08	06	Air Traffic Services and Air Traffic Management
010 08	02	02	02	02	Aeronautical Information Services
010 09	06	04	06	04	Aerodromes (Annex 14- Design and Ops)
010 10	01	01	01	01	Facilitation (Annex 9)
010 11	01	01	01	01	Search and Rescue
010 12	03	01	03	01	Security
010 13	01	01	01	01	Aircraft accident and incident investigation
Total Questions	**44**	**33**	**44**	**33**	

Subject: 021 – AIRCRAFT GENERAL KNOWLEDGE – AIRFRAME/SYSTEMS/POWER PLANT					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	Syllabus area
Time (hr)	**2:00**	**1:30**	**2:00**	**1:30**	
Distribution of questions with regard to the topics of the syllabus					
021 01	02	01	02	01	Loads/stresses/fatigue/corrosion /maintenance
021 02	03	03	03	02	Airframe construction & materials
021 03	05	03	04	03	Hydraulics
021 04	06	05	03	02	Landing gear, wheels, tyres & brakes
021 05	07	04	05	03	Flight controls
021 06	05	03	02	01	Pressurization and air conditioning
021 07	03	03	02	01	Anti and De-icing
021 08	05	03	03	02	Fuel systems
021 09	12	09	12	09	Electrics
021 10	06	14	08	10	Piston engines +props (A)
021 11	20	09	20	13	Turbine engines
021 12	03	02	02	01	Protection & detection Smoke/fire
021 13	03	01			Oxygen systems
021 14			01	01	Helicopter miscellaneous
021 15			04	03	Helicopter rotor heads
021 16			06	05	Helicopter transmission
021 17			03	03	Helicopter blades
Total Questions	**80**	**60**	**80**	**60**	

Subject: 022 – AIRCRAFT GENERAL KNOWLEDGE – INSTRUMENTATION					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:30**	**1:00**	**1:30**	**1:00**	
Distribution of questions with regard to the topics of the syllabus					
022 01	07	07	09	08	Sensors /gauges
022 02	08	07	10	08	Pressure instruments/ AOA /temperature /ADC
022 03	03	03	04	03	Magnetism/DRMC/ flux valve
022 04	05	05	07	06	Gyroscopic instruments
022 05	03		03		INS & IRS
022 06	08	06			Auto flight control systems (A)
022 07			07	04	Auto flight control systems (H)
022 08	03	02			Trim/Yaw damper/flight envelope protection
022 09	02				Autothrottle and automatic thrust control system
022 10	02				Communication systems
022 11	04		04		Flight Management Systems
022 12	09	05	09	06	Alerting & proximity systems
022 13	04	04	05	04	Integrated systems/electronic displays
022 14	01		01		Maintenance, monitoring and recording systems
022 15	01		01		Digital circuits and computers
Total Questions	**60**	**39**	**60**	**39**	

Subject: 031– FLIGHT PERFORMANCE AND PLANNING - MASS AND BALANCE					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**1:00**	**1:00**	**1:00**	
Distribution of questions with regard to the topics of the syllabus					
031 01	03	03	03	03	Purpose of Mass and balance
031 02	08	08	09	09	Loading
031 03	01	01	01	01	Fundamentals of CG calculations
031 04	04	05	05	05	Moments/BEM CG/ %MAC
031 05	07	06	05	05	Determination CG/Load &Trim sheets/Effect of shift-add-remove on CG
031 06	02	02	02	02	Cargo handling /area & running load limitations
Total Question	**25**	**25**	**25**	**25**	

Subject: 032 – FLIGHT PERFORMANCE AND PLANNING – PERFORMANCE (AEROPLANES)					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**0:45**			
Distribution of questions with regard to the topics of the syllabus					
032 01	09	12			General Performance Theory
032 02	02	05			Class B- Single Engine Aeroplanes
032 03	04	08			Class B- Multi Engine Aeroplanes
032 04	20				Performance Class A
Total Questions	**35**	**25**			

Subject: 033 – FLIGHT PERFORMANCE AND PLANNING – FLIGHT PLANNING AND MONITORING					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**2:00**	**1:30**	**2:00**	**1:30**	
Distribution of questions with regard to the topics of the syllabus					
033 01	05	10	09	12	VFR Navigation plan
033 02	11		11		IFR Navigation plan
033 03	13	12	09	09	Fuel planning
033 04	04	01	04	01	Pre flight preparation
033 05	05	05	05	06	ICAO flight plan
033 06	05	05	05	05	Flight monitoring and in -flight replanning
Total Questions	**43**	**33**	**43**	**33**	

Subject: 034 – FLIGHT PERFORMANCE AND PLANNING – PERFORMANCE (HELICOPTERS)					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)			**1:00**	**0:45**	
Distribution of questions with regard to the topics of the syllabus					
034 01			15	15	General Performance Theory
034 02			05	05	Performance Class 3
034 03			05		Performance Class 2
034 04			10		Performance Class 1
Total Questions			**35**	**20**	

Subject: 040 – HUMAN PERFORMANCE					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**0:45**	**1:00**	**0:45**	
Distribution of questions with regard to the topics of the syllabus					
040 01	02	01	02	01	Human Factors: Basic concepts
040 02	28	21	28	21	Basics of Flight Physiology
040 03	18	14	18	14	Basic Aviation Psychology
Total Questions	**48**	**36**	**48**	**36**	

Subject: 050 – METEOROLOGY					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**2:00**	**1:30**	**2:00**	**1:30**	
Distribution of questions with regard to the topics of the syllabus					
050 01	11	09	11	09	The atmosphere
050 02	10	06	10	06	Wind
050 03	04	04	04	04	Thermodynamics
050 04	07	06	07	06	Clouds and fog
050 05	02	02	02	02	Precipitation
050 06	07	06	07	06	Air masses and fronts
050 07	06	02	06	02	Pressure systems
050 08	08	03	08	03	Climatology
050 09	13	11	13	11	Flight hazards
050 10	16	14	16	14	Meteorology information
Total Questions	**84**	**63**	**84**	**63**	

Subject: 061 – GENERAL NAVIGATION					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**2:00**	**1:30**	**2:00**	**1:30**	
Distribution of questions with regard to the topics of the syllabus					
061 01	15	10	15	10	Basics of navigation
061 02	01	01	01	01	Magnetism and compasses
061 03	14	12	14	12	Charts
061 04	16	11	16	11	Dead reckoning navigation
061 05	14	11	14	11	In flight navigation
Total Questions	**60**	**45**	**60**	**45**	

Subject: 062 – RADIO NAVIGATION					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:30**	**0:30**	**1:30**	**0:30**	
Distribution of questions with regard to the topics of the syllabus					
062 01	07	04	07	04	Basic radio propagation theory
062 02	21	11	21	11	Radio aids
062 03	12	02	12	02	Radar
062 04					
062 05	10		15		Area Navigation systems
062 06	11	05	11	05	Global Navigation systems
062 07	5				PBN
Total Questions	**66**	**22**	**66**	**22**	

Subject: 070 – OPERATIONAL PROCEDURES					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:15**	**0:45**	**1:00**	**0:45**	
Distribution of questions with regard to the topics of the syllabus					
071 01	25	18	21	16	General requirements
071 02	20	12	14	12	Special Operational Procedures and hazards
071 03			03	02	Emergency procedures (helicopters)
Total Questions	**45**	**30**	**38**	**30**	

Subject: 081 – PRINCIPLES OF FLIGHT (AEROPLANES)				
Theoretical knowledge examination				
Exam duration, total number of questions and distribution of questions				
	ATPL(A)	**CPL(A)**	**CPL(H)**	**Syllabus area**
Time (hr)	**1:00**	**0:45**		
Distribution of questions with regard to the topics of the syllabus				
081 01	17	14		Subsonic aerodynamics
081 02	06			High speed aerodynamics
081 03				
081 04	05	05		Stability
081 05	04	03		Control
081 06	03	03		Limitations
081 07	04	03		Propellers
081 08	05	05		Flight mechanics
Total Questions	**44**	**33**		

Subject: 082 – PRINCIPLES OF FLIGHT (HELICOPTERS)					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time (hr)			**1:00**	**1:00**	
Distribution of questions with regard to the topics of the syllabus					
082 01			05	05	Subsonic aerodynamics
082 02			03	03	Transonic and compressibility effects
082 03			01	01	Rotorcraft types
082 04			12	12	Main rotor aerodynamics
082 05			10	10	Main rotor mechanics
082 06			05	05	Tail rotors
082 07			05	05	Equilibrium, stability and control
082 08			03	03	Helicopter flight mechanics
Total Questions			**44**	**44**	

Subject: 091 – VFR COMMUNICATIONS					
Theoretical knowledge examination					
Exam duration, total number of questions and distribution of questions					
	ATPL(A)	**CPL(A)**	**ATPL(H)/IR**	**CPL(H)**	**Syllabus area**
Time	**0:30**	**0:30**	**0:30**	**0:30**	
Distribution of questions with regard to the topics of the syllabus					
091 01	05	05	05	05	Definitions
091 02	12	12	12	12	General operating procedures
091 03	02	02	02	02	Weather information terms
091 04	02	02	02	02	Action communication failure
091 05	02	02	02	02	Distress and urgency procedures
091 06	01	01	01	01	General principles of propagation and allocation of frequencies
Total Question	**24**	**24**	**24**	**24**	

Subject: 092 – IFR COMMUNICATIONS						
Theoretical knowledge examination						
Exam duration, total number of questions and distribution of questions						
	ATPL(A	**CPL(A)**	**ATPL(H)/IR**	**ATPL(H)**	**CPL(H**	**Syllabus area**
Time (hr)	**0:30**		**0:30**			
Distribution of questions with regard to the topics of the syllabus						
092 01	05		05			Definitions
092 02	11		11			General operating procedures
092 03	02		02			Action to be taken in case of communication failure
092 04	02		02			Distress and urgency procedures
092 05	02		02			Relevant weather information term
092 06	02		02			General principles of propagation and allocation of frequencies
092 07						Morse code
Total Questions	**24**		**24**			