



Circulaire

**CIR/FCL 16**

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**Objet : La qualification FI(A).**

Ref. :

Arrêté royal du 4 mars 2008 réglementant les licences civiles de pilote d'avions. Art. 78, 79, 80, 81 et 83.

JAR-FCL 1.300 / 1.330 / 1.335 / 1.340 / 1.345 / 1.350 / 1.355  
Appendix 1 & 2 to JAR-FCL 1.330 & 1.345  
Appendix 1 to JAR-FCL 1.340  
AMC FCL 1.340  
IEM FCL 1.330  
IEM FCL 1.355

**Betreft: De bevoegdverklaring FI(A).**

Ref. :

Koninklijk besluit van 4 maart 2008 tot regeling van de burgerlijke vergunningen van bestuurder van vliegtuigen. Art.78, 79, 80, 81 en 83.

JAR-FCL 1.300 / 1.330 / 1.335 / 1.340 / 1.345 / 1.350 / 1.355  
Appendix 1 & 2 to JAR-FCL 1.330 & 1.345  
Appendix 1 to JAR-FCL 1.340  
AMC FCL 1.340  
IEM FCL 1.330  
IEM FCL 1.355

Le Directeur général a.i.,  
De Directeur-generaal a.i.,

L'édition 4 comprend  
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## FCL 16

Cette circulaire décrit la formation, le programme et les procédures qui sont d'application pour l'épreuve d'aptitude en vue de l'obtention de la qualification d'instructeur de vol FI(A).

Elle comprend :

- JAR-FCL 1.335  
FI(A) – Pre-requisite requirement (f)
- JAR-FCL 1.340  
FI(A) – Course
- App 1 to JAR-FCL 1.330 & 1.345  
Arrangements for the flight instructor rating (FI(A)) skill test, proficiency check and oral theoretical knowledge examination
- IEM FCL 1.330  
Flight instructor rating (FI(A)) skill test and proficiency check form
- App 2 to JAR-FCL 1.330 & 1.345  
Contents of the flight instructor rating (FI(A)) skill test, oral theoretical knowledge examination and proficiency check
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Flight instructor rating (FI(A)) – Revalidation and renewal form

## FCL 16

Deze circulaire beschrijft de opleiding, het programma en de procedures die van toepassing zijn voor de vaardigheidstest met het oog op het bekomen en het behouden van de bevoegdverklaring vlieginstructeur FI(A).

Zij omvat:

- JAR-FCL 1.335  
FI(A) – Pre-requisite requirement (f)
- JAR-FCL 1.340  
FI(A) – Course
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## **JAR-FCL 1.335 (f) – Pre-entry flight test (art. 79, 6° Royal Decree of 4 March 2008)**

Before being permitted to begin an approved course of training for a FI(A) rating, an applicant shall have passed a specific pre-entry flight test with an FI qualified as in JAR-FCL 1.330(f) based upon the proficiency check as set out in Appendix 3 to 1.240 within the six months preceding the start of the course (see circular FCL 21 (SPA – Skill test)). The flight test will assess the ability of the applicant to undertake the course.

## **JAR-FCL 1.340      FI(A) – Course**

- (a) An applicant for the FI(A) rating shall have completed an approved course of theoretical knowledge instruction and flight training at an approved FTO (see appendix 1 tot JAR-FCL 1.340 and AMC FCL 1.340)
- (b) The course is intended to train the applicant to give instruction on single-engine aeroplanes up to PPL(A) standard. The flight instruction shall comprise at least 30 hours of flight training, of which 25 hours shall be dual flight instruction. The remaining five hours may be mutual flying ( that is, two applicants flying together to practice flight demonstrations ).Of the 25 hours, five hours may be conducted in a flight simulator or FNPT approved for the purpose by the Authority. The skill test is additional to the course training time.

## **Appendix 1 to JAR–FCL 1.330 & 1.345**

### **Arrangements for the flight instructor rating (FI(A)) skill test, proficiency check and oral theoretical knowledge examination**

(See JAR–FCL 1.330, 1.345, 1.355, 1.380, 1.385 and 1.395)

- 1 The skill test for a FI(A) rating is set out in Appendix 2 to JAR–FCL 1.330 & 1.345. The test comprises oral theoretical examinations on the ground, pre-flight and post flight briefings and in-flight FI(A) demonstrations during skill tests in an aeroplane.
- 2 An applicant for the skill test shall have received instruction on the same type or class of aeroplane used for the test. The aeroplane used for the test shall meet the requirements set out in Appendix 1a to JAR–FCL 1.055, paragraph 25 (See circular FCL 2 – FTO).
- 3 Before taking the skill test an applicant shall have completed the required training. The FTO shall produce the applicant's training records when required by the examiner.
- 4 Section 1, the oral theoretical knowledge examination part of the skill test, is sub-divided into two parts:
  - (a) the applicant is required to give a lecture under test conditions to other 'student(s)', one of whom will be the examiner. The test lecture is to be selected from items a–h of Section 1. The amount of time for preparation of the test lecture shall be agreed beforehand with the examiner. Appropriate literature may be used by the applicant. The test lecture should not exceed 45 minutes.
  - (b) the applicant is tested orally by an examiner for knowledge of items a–i of Section 1 and the 'teaching and learning' content given in the FI(A) courses.
- 5 Section 2, 3 and 7 are for a FI(A) rating for single engine (SE) single pilot aeroplanes (SPAs). These sections comprise exercises to demonstrate the ability to be a FI(A) (i.e. instructor demonstration exercises) chosen by the examiner from the flight syllabus of the FI(A) training courses (see AMC FCL 1.340, 1.380 and 1.395). The applicant will be required to demonstrate FI(A) abilities, including briefing, flight instruction and de-briefing.
- 6 Section 4 is intentionally blank and may be used for the inclusion of other FI(A) demonstration exercises, as decided by the examiner and acknowledged by the applicant before the skill test.
- 7 Section 5 comprises additional instructor demonstration exercises for a FI(A) rating for multi-engine (ME) SPAs. This section, if required, shall use a ME SPA, simulator or FNPT II. If a simulator or FNPT is used, this shall simulate a ME aeroplane. This section shall be completed in addition to Section 2, 3 and 4 (if applicable) and 7.
- 8 Section 6 is intentionally blank. This part will include additional FI(A) rating demonstration exercises, as decided by the examiner and agreed with the applicant before the skill test, for a FI(A) rating for instrument ratings (IR). These exercises will be related to the training requirements for the initial issue of an IR.
- 9 During the skill test the applicant shall occupy the seat normally occupied by the FI(A). The examiner or another FI(A) shall function as the 'student'. The applicant shall be required to explain the relevant exercises and to demonstrate their conduct to the 'student', where appropriate. Thereafter, the 'student' shall execute the same manoeuvre including typical mistakes of inexperienced students. The applicant is expected to correct mistakes orally and/or, if necessary, by intervening.
- 10 Section 1 and 2 through 7 (as relevant) shall be completed within a period of six months but all Sections should, wherever possible, be completed on the same day. Failure in any exercise within Sections 2, 3 and 4 (if applicable) and 5/6 (if relevant) requires a re-test covering all exercises. Section 1, if failed, may be retaken separately.
- 11 The examiner may terminate the test at any stage if it is considered that the applicant's demonstration of flying or instructional skills require a re-test.
- 12 The examiner shall be the pilot-in-command, except in circumstances agreed by the examiner when another FI(A) is designated as pilot-in-command for the flight. Responsibility for the flight shall be allocated in accordance with national regulations.
- 13 The skill test contents and sections set out in Appendix 2 to JAR–FCL 1.330 & 1.345 shall be used for the skill test. The applicant for the test will use the application form as set out in IEM FCL 1.330.

**IEM FCL 1.330**  
**Flight instructor rating (FI(A)) skill test and proficiency check form**  
 See JAR-FCL 1.330 and 1.345

**APPLICATION AND REPORT FORM FOR THE FI(A) SKILL TEST**

<b>1</b>	<b>Applicants personal particulars:</b>		
Applicant's last name:		First names:	
Date of Birth:		Tel (Home):	Tel (Work):
Address:		Country:	

<b>2</b>	<b>Licence Details</b>		
Licence type:		Number:	
Class ratings included in the licence:		Exp. Date:	
Type ratings included in the licence:	1.		
	2.		
	3.		
	4.		
	5.		
Other ratings included in the licence:	1.		
	2.		
	3.		
	4.		
	5.		

<b>3</b>	<b>Pre-course flying experience (See JAR-FCL 1.335)</b>			
TOTAL FLYING HOURS	PIC hours	SINGLE-ENGINE (PISTON) preceding 6 months	INSTRUMENT FLIGHT INSTRUCTION	CROSS-COUNTRY hours

*CPL THEORETICAL EXAMINATION PASSED .....(date) (For PPL holders only)*  
*(Copy of pass shall be submitted with this form)*

<b>4</b>	<b>Pre-entry flight test (See JAR–FCL 1.335(f))</b>
<i>I recommend .....for the Flight Instructor Course.</i>	
Name of FTO:	Date of flight test:
Name of FI conducting the test (Block capitals):	
Licence number:	
Signature:	

<b>5</b>	<b>Declaration by the applicant</b>				
<i>I have received a course of training in accordance with the syllabus approved by the Authority for the: (Tick as applicable)</i>					
Flight Instructor Rating FI(A)		Instrument Rating Instructor Rating (IRI(A))		Class Rating Instructor Rating for multi- engine SPA – (CRI(A) ME SPA)	
Applicant's name: (Block Letters)			Signature:		

<b>6</b>	<b>Declaration by the chief flight instructor</b>				
<i>I certify that ..... has satisfactorily completed an approved course of training for the</i>					
Flight Instructor Rating FI(A)		Instrument Rating Instructor Rating (IRI(A))		Class Rating Instructor Rating for multi- engine SPA – (CRI(A) ME SPA)	
<i>in accordance with the relevant syllabus approved by the Authority.</i>					
Flying hours during the course:					
Aeroplane/s, simulator/s or flight and navigation procedure trainers used :					
Name of CFI:					
Signature:					
Name of FTO:					

7	<b>Flight instructor examiner's certificate</b>		
<i>I have tested the applicant according to the examination report</i>			
<b>A – FLIGHT INSTRUCTOR EXAMINER'S ASSESSMENT in case of partial pass:</b>			
Theoretical oral examination:		Skill test:	
<i>Passed</i>	<i>Failed</i>	<i>Passed</i>	<i>Failed</i>
	I recommend further flight/ground training with a FI instructor before re-test		
	I do not consider further flight/theoretical instruction necessary before re-test		
	<i>Tick as applicable</i>		
<b>B – FLIGHT INSTRUCTOR EXAMINER'S ASSESSMENT:</b>			
	Flight Instructor rating		
	Instrument Instructor rating		
	Class Rating Instructor Rating for multi-engine SPA		
	<i>Tick as applicable</i>		
FIE's name (block letters):			
Signature:			
Licence number:		Date:	

**Appendix 2 to JAR–FCL 1.330 & 1.345**

**Contents of the flight instructor rating (FI(A)) skill test, oral theoretical knowledge examination and proficiency check**

(See JAR–FCL 1.330, 1.345)

(See IEM FCL 1.330)

<b>SECTION 1 THEORETICAL KNOWLEDGE ORAL</b>	
a	Air law
b	Aircraft General Knowledge
c	Flight Performance and Planning
d	Human Performance and Limitations
e	Meteorology
f	Navigation
g	Operational Procedures
h	Principles of Flight
i	Training Administration

**SECTIONS 2 AND 3 SELECTED MAIN EXERCISE:**

<b>SECTION 2 PRE-FLIGHT BRIEFING</b>	
a	Visual Presentation
b	Technical Accuracy
c	Clarity of Explanation
d	Clarity of Speech
e	Instructional Technique
f	Use of Models and Aids
g	Student Participation

<b>SECTION 3 FLIGHT</b>	
a	Arrangement of Demo
b	Synchronisation of Speech with Demo
c	Correction of Faults
d	Aeroplane Handling
e	Instructional Technique
f	General Airmanship/Safety
g	Positioning, use of Airspace
<b>SECTION 4 OTHER EXERCISES</b>	
a	
b	
c	
d	
e	
f	
g	
<b>SECTION 5 MULTI-ENGINE EXERCISES</b>	
a	<sup>1</sup> Actions following an Engine failure shortly after take-off
b	<sup>1</sup> A single-engine approach and go around
c	<sup>1</sup> A single-engine approach and landing
d	
e	
f	
g	

<sup>1</sup> These exercises shall be demonstrated at the skill test for the single-pilot multi-engine class rating instructor rating.

<b>SECTION 6 INSTRUMENT EXERCISES</b>	
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a	
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b	
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c	
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d	
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e	
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f	
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g	
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<b>SECTION 7 POSTFLIGHT DE-BRIEFING</b>	
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a	Visual Presentation
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b	Technical Accuracy
---	--------------------

c	Clarity of Explanation
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d	Clarity of Speech
---	-------------------

e	Instructional Technique
---	-------------------------

f	Use of Models and Aids
---	------------------------

g	Student Participation
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## **Appendix 1 to JAR-FCL 1.340**

### **Flight instructor rating (aeroplane) (FI(A)) course**

(See JAR-FCL 1.340)

(See AMC FCL 1.340)

#### **COURSE OBJECTIVE**

- 1 The aim of the FI(A) course is to train aeroplane licence holders to the level of proficiency necessary for the issue of a FI(A) rating and, for that purpose, to
  - a. refresh and bring up to date the technical knowledge of the student instructor;
  - b. train the student instructor to teach the ground subjects and air exercises;
  - c. ensure that the student instructor's flying is of a sufficiently high standard; and
  - d. teach the student instructor the principles of basic instruction and to apply them at the PPL level.
- 2 With the exception of the section on Teaching and Learning, all the subject detail contained in the Ground and Flight Training Syllabus is complementary to the PPL(A) course syllabus and should already be known by the applicant.
- 3 The FI(A) course should give particular stress to the role of the individual in relation to the importance of human factors in the man-machine and theoretical knowledge environment interaction. Special attention should be paid to the applicant's maturity and judgement including an understanding of adults, their behavioural attitudes and variable levels of education.
- 4 During the course, the applicants shall be made aware of their own attitudes to the importance of flight safety. Improving safety awareness shall be a fundamental objective throughout the course. It will be of major importance for the course of training to aim at giving applicants the knowledge, skills and attitudes relevant to a flight instructor's task.
- 5 On successful completion of the course and final test the applicant may be issued with a FI(A) rating.

#### **TEACHING AND LEARNING**

- 6 The syllabus is set out in AMC FCL 1.340, Part 1. An approved FI(A) theoretical knowledge course shall comprise not less than 125 hours including progress tests. Pilots holding or having held a FI(H) rating are credited with 75 hours towards the 125 hours of the Teaching and Learning Part 1 of the FI(A) course.

#### **FLYING TRAINING**

- 7 The flying training syllabus is set out in AMC FCL 1.340, Part 2. An approved FI(A) course shall comprise not less than 30 hours of flight instruction.

#### **SKILL TEST**

- 8 On completion of the course, the applicant shall take the skill test in accordance with Appendices 1 and 2 to JAR-FCL 1.330 & 1.345.

**AMC FCL 1.340**

**Flight instructor rating (aeroplane) (FI(A)) course**

See JAR-FCL 1.340

See Appendix 1 to JAR-FCL 1.340

**COURSE OBJECTIVE**

The aim of this course is to give adequate training to the applicant in theoretical knowledge instruction and flight instruction in order to instruct for a PPL(A), a CPL(A), a single-engine class or type rating and, if applicable, a night qualification.

**PART 1**

**TEACHING AND LEARNING**

Item No.

**1 THE LEARNING PROCESS**

Motivation  
Perception and understanding  
Memory and its application  
Habits and transfer  
Obstacles to learning  
Incentives to learning  
Learning methods  
Rates of learning

**2 THE TEACHING PROCESS**

Elements of effective teaching  
Planning of instructional activity  
Teaching methods  
Teaching from the 'known' to the 'unknown'  
Use of 'lesson plans'

**3 TRAINING PHILOSOPHIES**

Value of a structured (approved) course of training  
Importance of a planned syllabus  
Integration of theoretical knowledge and flight instruction

**4 TECHNIQUES OF APPLIED INSTRUCTION**

a. Theoretical knowledge – Classroom instruction techniques

Use of training aids  
Group lectures  
Individual briefings  
Student participation/discussion

b. FLIGHT – Airborne instruction techniques

The flight/cockpit environment  
Techniques of applied instruction  
Post-flight and inflight judgement and decision making

**5 STUDENT EVALUATION AND TESTING**

a. Assessment of student performance

The function of progress tests  
Recall of knowledge  
Translation of knowledge into understanding  
Development of understanding into actions  
The need to evaluate rate of progress

b. Analysis of student errors

- Establish the reason for errors
- Tackle major faults first, minor faults second
- Avoidance of over criticism
- The need for clear concise communication

6 TRAINING PROGRAMME DEVELOPMENT

- Lesson planning
- Preparation
- Explanation and demonstration
- Student participation and practice
- Evaluation

7 HUMAN PERFORMANCE AND LIMITATIONS RELEVANT TO FLIGHT INSTRUCTION

- Physiological factors
- Psychological factors
- Human information processing
- Behavioural attitudes
- Development of judgement and decision making

8 HAZARDS INVOLVED IN SIMULATING SYSTEMS FAILURES AND MALFUNCTIONS IN THE AEROPLANE DURING FLIGHT

- Selection of a safe altitude
- Importance of 'touch drills'
- Situational awareness
- Adherence to correct procedures

9 NIGHT FLYING INSTRUCTION

- Objectives
- Legislation requirements
  - Aeroplane equipment
  - Aeroplane lights
  - Flight crew licences
  - Aerodrome licences (if applicable)
- Night familiarisation
- Preparation for flight
- Equipment required for flight
- Night vision accommodation
- Personal safety precautions in the parking areas
- External/internal checks – night considerations
- Aeroplane lights – operation

10 TRAINING ADMINISTRATION

- Flight/theoretical knowledge instruction records
- Pilot's personal flying log book
- The flight/ground curriculum
- Study material
- Official forms
- Aircraft Flight/Owner's Manuals/Pilot's Operating Handbooks
- Flight authorisation papers
- Aircraft documents
- The private pilot's licence regulations

SUGGESTED APPROXIMATE BREAKDOWN OF HOURS FOR THE THEORETICAL KNOWLEDGE INSTRUCTION  
SECTION OF THE FLIGHT INSTRUCTOR (AEROPLANE) COURSE.

*(The item numbers shown below relate to the item numbers of 'Teaching and learning' above.)*

Item No	Tuition hours	Practice hrs in class	Comment	Progress tests
1	2.00	–	Allow for questions and short discussion periods.	0.30
2	4.00	–	The tuition time should allow for questions and short discussion periods.	1.00
3	2.00	–	The PPL training syllabus should be used as reference material.	0.30
4.a.	5.00	32	The time spent in practice under this item will involve the applicants refreshing their technical knowledge, and developing their classroom instruction techniques. It will also include discussion between applicants and advice on teaching from the supervising instructor.	
4.b.	4.00	32	The time spent in practice will be mainly directed to the giving of pre-flight briefings. It will allow the applicants to develop their ability to give a practical and short briefing (10–15 minutes) to a student pilot. The briefing will outline in a logical sequence the flight lesson to be undertaken.	
5.a.	2.00	–	Emphasis should be placed on the validity of questions used in progress tests.	1.00
5.b.	2.00	–	Emphasis should be placed on the need to give encouragement to the student.	1.00
6	5.00	14	The time spent in practice will be directed towards the planning of classroom lesson periods and the development of the applicants' ability to construct lesson plans.	
7	5.00	–	Scenarios relevant to good judgement and decision making should be set and analysed.	1.00
8	2.00	–	Examples of hazards should cover a broad range of light aircraft and types of operation and not to be confined to the aircraft used on the course.	1.00
9	5.00	–	Long briefings to teach an applicant to give instruction in night flying	
10	2.00	–	General revision of relevant documents.	1.00
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<b>TOTAL:</b>	40.00	78.00		7.00
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<b>COURSE TOTAL:</b>			125 HOURS (including progress tests)	

## PART 2

### AIR EXERCISES

1 The air exercises are similar to those used for the training of PPL(A) but with additional items designed to cover the needs of a flight instructor.

2 The numbering of exercises should be used primarily as an exercise reference list and as a broad instructional sequencing guide: therefore the demonstrations and practices need not necessarily be given in the order listed. The actual order and content will depend upon the following interrelated factors:

- The applicant's progress and ability
- The weather conditions affecting the flight
- The flight time available
- Instructional technique considerations
- The local operating environment

3 It follows that student instructors will eventually be faced with similar interrelated factors. They should be shown and taught how to construct flight lesson plans, taking these factors into account, so as to make the best use of each flight lesson, combining parts of the set exercises as necessary.

### GENERAL

4 The briefing normally includes a statement of the aim and a brief allusion to principles of flight only if relevant. An explanation is to be given of exactly what air exercises are to be taught by the instructor and practised by the student during the flight. It should include how the flight will be conducted with regard to who is to fly the aeroplane and what airmanship, weather and flight safety aspects currently apply. The nature of the lesson will govern the order in which the constituent parts are to be taught.

5 The four basic components of the briefing will be:

- 1 The aim
- 2 Principles of Flight (briefest reference only)
- 3 The Air Exercise(s) (what, and how and by whom)
- 4 Airmanship (weather, flight safety etc.)

### PLANNING OF FLIGHT LESSONS

6 The preparation of lesson plans is an essential pre-requisite of good instruction and the student instructor is to be given supervised practice in the planning and practical application of flight lesson plans.

### GENERAL CONSIDERATIONS

7 The student instructor should complete flight training to practise the principles of basic instruction at the PPL(A) level.

8 During this training, except when acting as a student pilot for mutual flights, the student instructor shall occupy the seat normally occupied by the FI(A).

9 It is to be noted that airmanship is a vital ingredient of all flight operations. Therefore, in the following air exercises the relevant aspects of airmanship are to be stressed at the appropriate times during each flight.

10 If the privileges of the FI(A) rating are to include instruction for night flying, exercises 12 and 13 of the flight instruction syllabus should be undertaken at night in addition to by day either as part of the course or subsequent to rating issue.

## FLIGHT INSTRUCTION SYLLABUS CONTENTS

### LONG BRIEFINGS AND AIR EXERCISES

- 1 Familiarisation with the aeroplanes
- 2 Preparation before and action after flight
- 3 Air experience
- 4 Effects of controls
- 5 Taxiing
- 6 Straight and level flight
- 7 Climbing
- 8 Descending
- 9 Turning
- 10A Slow flight
- 10B Stalling
- 11A Spin recovery at the incipient stage
- 11B Developed spins – entry & recovery
- 12 Take-off and climb to downwind position
- 13 The circuit, approach and landing
- 14 First solo
- 15 Advanced turning
- 16 Forced landing without power
- 17 Precautionary landing
- 18A Pilot navigation
- 18B Navigation at lower levels/reduced visibility
- 18C Radio navigation
- 19 Introduction to Instrument Flying
- 20 Basic night flight

NOTE: Although exercise 11B is not required for the PPL course it is a requirement for the FI course.

### LONG BRIEFING EXERCISE 1

#### AEROPLANE FAMILIARISATION

##### Objectives

- Introduction to the aeroplane
- Explanation of the cockpit layout
- Aeroplane and engine systems
- Check lists, drills, controls
- Differences when occupying the instructor's seat

## EMERGENCY DRILLS

Action in the event of fire in the air and on the ground – engine cabin and electrical  
Systems failures as applicable to type  
Escape drills – location and use of emergency equipment and exits

## AIR EXERCISE 1

### FAMILIARISATION WITH THE AEROPLANE

Introduction to the Aeroplane  
Explanation of the Cockpit Layout  
Aeroplane Systems  
Check Lists, Drills, Controls

## EMERGENCY DRILLS

Action in the Event of Fire in the Air and on the Ground –Engine/Cabin/Electrical  
System Failure as Applicable to Type  
Escape Drills – Location and use of Emergency Equipment and Exits

## **LONG BRIEFING EXERCISE 2**

### PREPARATION FOR AND ACTION AFTER FLIGHT

Objectives  
Flight authorisation and aeroplane acceptance including technical log (if applicable) and certificate of maintenance  
Equipment required for Flight (Maps, etc.)  
External checks  
Internal checks  
Student comfort, harness, seat or rudder pedal adjustment  
Starting and Warming up Checks  
Power Checks  
Running Down, System Checks and Switching Off the Engine  
Leaving the Aeroplane, Parking, Security and Picketing  
Completion of Authorisation Sheet and Aeroplane Serviceability Documents

## AIR EXERCISE 2

### PREPARATION FOR AND ACTION AFTER FLIGHT

Flight Authorisation and Aeroplane Acceptance  
Aircraft Serviceability Documents  
Equipment Required for Flight (Maps etc.)  
External Checks  
Internal Checks  
Student Comfort, Harness, Seat or Rudder Pedal Adjustment  
Starting and Warming up Checks  
Power Checks  
Running Down, System Checks and Switching Off the Engine  
Leaving the Aircraft, Parking, Security and Picketing  
Completion of Authorisation Sheet and Aeroplane Serviceability Documents

### **LONG BRIEFING EXERCISE 3**

(Air Exercise only)

#### **AIR EXERCISE 3**

Air Experience

### **LONG BRIEFING EXERCISE 4**

#### **EFFECTS OF CONTROLS**

Objectives

Function of Primary Controls – when Laterally Level and Banked

Further Effect of Ailerons and Rudder

Effect of Inertia

Effect of Airspeed

Effect of Slipstream

Effect of Power

Effect of Trimming Controls

Effect of Flaps

Operation of Mixture Control

Operation of Carburettor Heat Control

Operation of Cabin Heat/Ventilation Systems

Effect of other Controls (as applicable)

Airmanship

#### **AIR EXERCISE 4**

#### **EFFECTS OF CONTROLS**

Primary Effects of Flying Controls – when Laterally Level and Banked

Further effects of Ailerons and Rudder

Effect of Airspeed

Effect of Slipstream

Effect of Power

Effect of Trimming Controls

Effect of Flaps

Operation of Mixture Control

Operation of Carburettor Heat Control

Operation of Cabin Heat/Ventilation Systems

Effect of other Controls as applicable

Airmanship

### **LONG BRIEFING EXERCISE 5**

#### **TAXIING**

Objectives:

Pre-Taxiing Checks

Starting, Control of Speed and Stopping

Engine Handling

Control of Direction and Turning (including manoeuvring in confined spaces)

Parking Area Procedures and Precautions

Effects of Wind and Use of Flying Controls

Effects of Ground Surface

Freedom of Rudder Movement  
Marshalling Signals  
Instrument Checks  
Airmanship and Air Traffic Control Procedures  
Common Errors

#### EMERGENCIES

Steering Failure/Brake Failure

#### AIR EXERCISE 5

##### TAXIING

Pre Taxiing Checks  
Starting, Control of Speed and Stopping  
Engine Handling  
Control of Direction and Turning  
Turning in Confined Spaces  
Parking Area Procedures and Precautions  
Effects of Wind and Use of Flying Control  
Effects of Ground Surface  
Freedom of Rudder Movement  
Marshalling Signals  
Instrument Checks  
Airmanship and Air Traffic Control Procedures

#### EMERGENCIES

Steering Failure/Brake Failure

#### **LONG BRIEFING EXERCISE 6**

##### STRAIGHT AND LEVEL FLIGHT

Objectives:  
The Forces  
Longitudinal Stability and Control in Pitch  
Relationship of C of G to Control in Pitch  
Lateral and Directional Stability (Control of Lateral Level and Balance)  
Attitude and Balance Control  
Trimming  
Power Settings and Airspeeds  
Drag and Power Curves  
Range and Endurance  
Airmanship  
Common Errors

#### AIR EXERCISE 6

##### STRAIGHT AND LEVEL

At normal Cruising Power:

- Attaining and Maintaining Straight and Level Flight
- Demonstration of Inherent Stability
- Control in Pitch, including use of Elevator Trim control
- Lateral Level, Direction and Balance, use of Rudder Trim controls as applicable

At Selected Airspeeds (Use of Power):

Effect of Drag and use of Power (Two Airspeeds for one Power Setting)  
Straight and Level in Different Aeroplane Configurations (Flaps, Landing Gear)  
Use of Instruments to achieve Precision Flight  
Airmanship

## **LONG BRIEFING EXERCISE 7**

### **CLIMBING**

Objectives:

The Forces

Relationship between Power/Airspeed and Rate of Climb (Power Curves Maximum Rate of Climb ( $V_y$ ))

Effect of Mass

Effect of Flaps

Engine Considerations

Effect of density Altitude

The Cruise Climb

Maximum Angle of Climb ( $V_x$ )

Airmanship

Common Errors

### **AIR EXERCISE 7**

#### **CLIMBING**

Entry and maintaining the normal Maximum Rate Climb

Levelling Off

Levelling Off at Selected Altitudes

Climbing with Flaps down

Recovery to normal Climb

En Route Climb (Cruise Climb)

Maximum Angle of Climb

Use of Instruments to achieve Precision Flight

Airmanship

## **LONG BRIEFING EXERCISE 8**

### **DESCENDING**

Objectives:

The Forces

Glide Descent Angle – Airspeed – Rate of Descent

Effect of Flaps

Effect of Wind

Effect of Mass

Engine Considerations

Power Assisted Descent – Power/Airspeed – Rate of Descent

The Cruise Descent

The Sideslip

Airmanship

Common Errors

### **AIR EXERCISE 8**

## DESCENDING

Entry and maintaining the Glide  
Levelling Off  
Levelling Off at Selected Altitudes  
Descending with Flaps down  
Powered Descent – Cruise Descent (inc. effect of Power/Airspeed)  
Sideslipping (on suitable types)  
Use of Instrument to achieve Precision Flight  
Airmanship

## LONG BRIEFING EXERCISE 9

### TURNING

Objectives:  
The Forces  
Use of Controls  
Use of Power  
Maintenance of Attitude and Balance  
Medium Level Turns  
Climbing and Descending Turns  
Slipping Turns  
Turning onto Selected Headings – Use of Gyro Heading Indicator and Magnetic Compass  
Airmanship  
Common Errors

## AIR EXERCISE 9

### TURNING

Entry and maintaining Medium Level Turns  
Resuming straight flight  
Faults in the Turn (incorrect Pitch, Bank, Balance)  
Climbing Turns  
Descending Turns  
Slipping Turns (on suitable types)  
Turns to Selected Headings, use of Gyro Heading Indicator and Compass  
Use of Instruments to achieve Precision flight  
Airmanship

## STALL/SPIN AWARENESS & AVOIDANCE

### TRAINING CONSISTS OF EXERCISES:

10 A, 10 B and 11 A

## **LONG BRIEFING EXERCISE 10 A**

### **SLOW FLIGHT**

#### **Objectives:**

Aeroplane Handling Characteristics during Slow Flight at

$V_{s1}$  &  $V_{s0} + 10$  knots

$V_{s1}$  &  $V_{s0} + 5$  knots

Slow Flight During Instructor Induced Distractions

Effect of overshooting in configurations where application of engine power causes a strong 'nose-up' trim change

Airmanship

Common Errors

### **AIR EXERCISE 10 A**

### **SLOW FLIGHT**

Airmanship

Safety Checks

Introduction to Slow Flight

Controlled Slow Flight in the Clean Configuration at:

$V_{s1} + 10$  knots & with Flaps Down

$V_{s0} + 10$  knots:

Straight & Level Flight

Level Turns

Climbing & Descending

Climbing & Descending Turns

Controlled Slow Flight in the Clean Configuration at:

$V_{s1} + 5$  knots & with Flaps Down

$V_{s0} + 5$  knots:

Straight & Level Flight

Level Turns

Climbing & Descending

Climbing & Descending Turns

Descending 'Unbalanced' Turns at Low Airspeed –  
the need to maintain Balanced Flight

'Instructor Induced Distractions' during Flight at Low Airspeed – the need to Maintain Balanced Flight and a safe Airspeed

Effect of going around in configurations where application of engine power causes a strong 'nose up' trim change

## **LONG BRIEFING EXERCISE 10 B**

### **STALLING**

#### **Objectives:**

Characteristics of the Stall

Angle of Attack

The Effectiveness of the Controls at the Stall

Factors Affecting the Stalling Speed:

Effect of Flaps/Slats/Slots

Effect of Power/Mass/C of G/Load Factor

The Effects of Unbalance at the Stall

The Symptoms of the Stall

Stall Recognition & Recovery

## Stalling & Recovery:

Without Power

With Power On

With Flaps Down

Maximum Power Climb (straight & turning flight to the point of Stall with uncompensated Yaw)

\* Stalling & Recovery during manoeuvres involving more than 1 G (accelerated stalls, including secondary stalls & recoveries)

Recovering from Incipient Stalls in the landing and other configurations and conditions

Recovering at the Incipient Stage during Change of Configuration

Stalling and Recovery at the Incipient Stage with 'Instructor Induced' Distractions

Airmanship

Common Errors

\* Consideration is to be given to manoeuvre limitations and references to The Owners/Flight manual or Pilot's Operating Handbook must also be made in relation to Mass and Balance limitations. These factors must also be covered in the next exercise Spinning.

## AIR EXERCISE 10 B

### STALLING

Airmanship – Safety checks

The symptoms of the Stall

Stall Recognition & Recovery

Recovery Without Power

Recovery With Power

Recovery when a Wing Drops at the Stall

Stalling with Power 'ON' & Recovery

Stalling with Flap 'Down' & Recovery

Maximum Power Climb (straight & turning flight) to the point of Stall with uncompensated YAW – Effect of unbalance at the stall when climbing power is being used.

\* Stalling & Recovery during Manoeuvres involving more than 1 G (accelerated stalls, including secondary stalls & recoveries)

Recoveries from Incipient Stalls in the landing and other configurations & conditions

Recoveries at the Incipient Stage during change of Configuration

Instructor Induced Distractions during Stalling

\* Consideration of manoeuvre limitations and the need to refer to the Aeroplane Manual and Weight (mass) & Balance calculations. These factors are to be covered in the next exercise – Spinning.

## LONG BRIEFING EXERCISE 11 A

### SPIN RECOVERY at the INCIPIENT STAGE

Objectives:

Causes, Stages, Autorotation and Characteristics of the Spin

Recognition and Recovery at the Incipient Stage – entered from various flight attitudes

Aeroplane Limitations

Airmanship

Common Errors

## AIR EXERCISE 11 A

### SPIN RECOVERY at the INCIPIENT STAGE

Aeroplane Limitations

Airmanship

Safety Checks

Recognition at the Incipient Stage of a Spin

Recoveries from Incipient Spins entered from various attitudes with the Aeroplane in the Clean Configuration including instructor induced distractions.

## LONG BRIEFING EXERCISE 11 B

### SPIN RECOVERY at the DEVELOPED STAGE

Objectives:

The Spin Entry

Recognition & Identification of Spin Direction

The Spin Recovery

Use of Controls

Effects of Power/Flaps (flap restriction applicable to type)

Effect of the C of G upon Spinning characteristics

Spinning from Various Flight Attitudes

Aeroplane Limitations

Airmanship – Safety Checks

Common Errors during Recovery

## AIR EXERCISE 11 B

### SPIN RECOVERY at the DEVELOPED STAGE

Aeroplane Limitations

Airmanship

Safety Checks

The Spin Entry

Recognition & Identification of the Spin Direction

The Spin Recovery (reference to Flight Manual)

Use of Controls

Effects of Power/Flaps (restrictions applicable to aeroplane type)

Spinning & Recovery from various Flight Attitudes

## LONG BRIEFING EXERCISE 12

### TAKE-OFF AND CLIMB TO DOWNWIND POSITION

Objectives:

Handling – Factors affecting the length of Take-off Run and Initial Climb

The Correct Lift Off Speed, use of Elevators (Safeguarding the Nose Wheel), Rudder and Power

Effect of Wind (including Crosswind Component)

Effect of Flaps (including the Decision to Use and the Amount Permitted)

Effect of Ground Surface and Gradient upon the Take-off Run

Effect of Mass, Altitude and Temperature on Take-off and climb Performance

Pre Take-Off Checks

Air Traffic Control Procedure (before Take-Off)

Drills, during and after Take-off  
Noise abatement procedures  
Tail Wheel Considerations (as applicable)  
Short/Soft Field Take-Off Considerations/Procedures

**EMERGENCIES:**

Aborted Take-Off  
Engine Failure after Take-Off  
Airmanship and Air Traffic Control Procedures  
Common Errors

**AIR EXERCISE 12**

**TAKE-OFF AND CLIMB TO DOWNWIND POSITION**

Pre Take-Off Checks  
Into Wind Take-Off  
Safeguarding the Nose Wheel  
Crosswind Take-Off  
Drills During and After Take-Off  
Short Take-Off and Soft Field Procedure/Techniques (including Performance Calculations)  
Noise abatement procedures  
Airmanship

**LONG BRIEFING EXERCISE 13**

**THE CIRCUIT APPROACH AND LANDING**

**Objectives:**

The Downwind Leg, Base Leg, Approach – Position and Drills  
Factors Affecting the Final Approach and the Landing Run  
Effect of Mass  
Effects of Altitude and Temperature  
Effect of Wind  
Effect of Flap

**The Landing**

Effect of Ground Surface and Gradient upon the Landing Run

**Types of Approach and Landing:**

Powered  
Crosswind

Flapless (at an appropriate stage of the course)

Glide

Short Field

Soft Field

Tail Wheel Aeroplane Considerations (as applicable)

Missed Approach

Engine Handling

Wake Turbulence Awareness

Windshear Awareness

Airmanship and Air Traffic Control Procedures

Mislanding/Go around

Special emphasis on lookout

Common Errors

## AIR EXERCISE 13

### THE CIRCUIT APPROACH AND LANDING

Circuit Procedures – Downwind, Base Leg  
Powered Approach and Landing  
Safeguarding the Nosewheel  
Effect of Wind on Approach and Touchdown Speeds and use of Flaps  
Crosswind Approach and Landing  
Glide Approach and Landing  
Flapless Approach and Landing (short and soft field)  
Short field and soft field procedures  
Wheel Landing (Tail Wheel Aircraft)  
Missed Approach/Go around  
Mislanding/Go around  
Noise abatement procedures  
Airmanship

## LONG BRIEFING EXERCISE 14

### FIRST SOLO AND CONSOLIDATION

A summary of points to be covered before sending the student on first solo.

NOTE: During the flights immediately following the solo circuit consolidation period the following should be covered:

Procedures for Leaving and Rejoining the Circuit  
The Local Area (Restrictions, Controlled Airspace, etc.)  
Compass Turns  
QDM Meaning and Use  
Airmanship  
Common Errors

## AIR EXERCISE 14

### FIRST SOLO AND CONSOLIDATION

During the flights immediately following the solo circuit consolidation period the following should be covered:

Procedures for Leaving and Rejoining the Circuit  
The Local Area (Restrictions, Controlled Airspace, etc.)  
Compass Turns  
Obtaining QDM's  
Airmanship

## **LONG BRIEFING EXERCISE 15**

### ADVANCED TURNING

Objectives:

The Forces

Use of Power

Effect of Load Factor:

    Structural Considerations

    Increased Stalling Speed

Physiological Effects

Rate and Radius of Turn

Steep, Level, Descending and Climbing Turns

Stalling in the Turn

\* Spinning from the Turn – Recovery at the Incipient Stage

\* The Spiral Dive

Unusual Attitudes and Recoveries

Airmanship

Common Errors

\* Considerations are to be given to manoeuvre limitations and reference to The Owner's/Flight Manual/Pilot's Operating Handbook must be made in relation to Mass and Balance, and any other restrictions for Practice Entries to the Spin.

### AIR EXERCISE 15

#### ADVANCED TURNING

Level, Descending and Climbing Steep Turns

Stalling in the Turn

The Spiral Dive

Spinning from the Turn

Recovery from Unusual Attitudes

Maximum Rate Turns

Airmanship

## **LONG BRIEFING EXERCISE 16**

### FORCED LANDING WITHOUT POWER

Objectives:

Selection of forced landing areas

Provision for change of plan

Gliding distance – consideration

Planning the descent

Key positions

Engine failure checks

Use of radio – R/T 'Distress' Procedure

The base leg

The final approach

Go around

The landing considerations

Actions after landing – Aeroplane security

Causes of engine failure

Airmanship

Common errors

## AIR EXERCISE 16

### FORCED LANDING WITHOUT POWER

#### Forced Landing Procedures

Selection of Landing Area:

Provision for Change of Plan

Gliding Distance Considerations

Planning the descent:

Key Positions

Engine Failure Checks

Engine cooling precautions

Use of Radio

The Base Leg

The Final Approach

The Landing ) When the Exercise is

Actions after Landing: ) conducted at an

Aeroplane Security ) Aerodrome

Airmanship

## LONG BRIEFING EXERCISE 17

### PRECAUTIONARY LANDING

Objectives:

Occasions when necessary (In Flight Conditions):

Landing area Selection and Communication (R/T Procedure)

Overhead Inspection

Simulated Approach

Climb Away

Landing at a Normal Aerodrome

Landing at a Disused Aerodrome

Landing on an Ordinary Field

Circuit and Approach

Actions After Landing:

Aeroplane Security

Airmanship

Common errors

## AIR EXERCISE 17

### PRECAUTIONARY LANDING

Occasions when necessary (In Flight Conditions):

Landing area selection

Overhead Inspection

Simulated Approach

Climb Away

Landing at a Normal Aerodrome

Landing at a Disused Aerodrome

Landing on an Ordinary Field

Circuit and Approach

Actions After Landing:

Aeroplane Security

Airmanship

## LONG BRIEFING EXERCISE 18A

### PILOT NAVIGATION

#### Flight Planning

##### Objectives:

Weather Forecast and Actual(s)

Map Selection and Preparation:

##### Choice of Route:

Regulated/Controlled Airspace

Danger, Prohibited and Restricted Areas

Safety Altitude

##### Calculations:

Magnetic Heading(s) and Time(s) enroute

Fuel Consumption

Mass and Balance

Mass and Performance

##### Flight Information:

NOTAMs etc.

Noting of Required Radio Frequencies

Selection of Alternate aerodrome(s)

Aircraft Documentation

##### Notification of the Flight:

Booking Out Procedure

Flight Plans

##### Aerodrome Departure

Organisation of Cockpit Workload

##### Departure Procedures:

Altimeter Settings

Setting Heading Procedures

Noting of ETA(s)

##### En-Route:

Map reading – identification of ground features

Maintenance of Altitudes and Headings

Revisions to ETA and Heading, wind effect, drift angle and groundspeed checks.

Log Keeping

Use of Radio (including VDF if applicable)

Minimum Weather Conditions for Continuance of Flight

'In Flight' Decisions, diversion procedures

Operations in Regulated/Controlled Airspace

Procedures for Entry, Transit and Departure

Navigation at Minimum Level

Uncertainty of Position Procedure ) Including R/T

Lost Procedure ) Procedure

Use of Radio Navaids

Arrival Procedures

Aerodrome Circuit Joining Procedures:

Altimeter Setting, ATC Liaison, R/T Procedure, etc.

Entering the Traffic Pattern (controlled/uncontrolled aerodromes)

Circuit Procedures

Parking Procedures

Security of Aeroplane Refuelling and Booking In

## AIR EXERCISE 18A

### PILOT NAVIGATION

#### Flight Planning:

Weather Forecast and Actual(s)

Map Selection and Preparation:

Choice of Route

Regulated/Controlled Airspace

Danger, Prohibited and Restricted Areas

Safety Altitude

#### Calculations:

Magnetic Heading(s) and Time(s) En-Route

Fuel Consumption

Mass and Balance

Mass and Performance

#### Flight Information:

NOTAMs etc.

Noting of Required Radio Frequencies

Selection of Alternate Aerodromes

Aeroplane Documentation

#### Notification of the Flight:

Flight clearance procedures (as applicable)

Flight Plans

### AERODROME DEPARTURE

#### Organisation of Cockpit Workload

Departure Procedures:

Altimeter Settings

#### En-route:

Noting of ETA(s)

Wind effect, drift angle, ground speed checks

Maintenance of Altitudes and Headings

Revisions to ETA and Heading

Log Keeping

Use of Radio (including VDF if applicable)

Minimum Weather Conditions for Continuance of Flight

'In Flight' Decisions

Diversion Procedure

Operations in Regulated/Controlled Airspace

Procedures for Entry, Transit and Departure

Uncertainty of Position Procedure

Lost Procedure

Use of Radio Navaids

Arrival Procedures:

Aerodrome Joining Procedures:

Altimeter Setting, ATC Liaison, etc.

Entering the Traffic Pattern

Circuit Procedures

Parking Procedures

Security of Aircraft

Refuelling

Booking In

## **LONG BRIEFING EXERCISE 18B**

### **NAVIGATION AT LOWER LEVELS/REDUCED VISIBILITY**

#### Objectives:

#### General Considerations:

Planning Requirements Prior to Flight in Entry/Exit Lanes  
ATC Rules, Pilot Qualifications and Aircraft Equipment  
Entry/Exit Lanes and Areas where Specific Local Rules Apply

#### Low Level Familiarisation:

Actions Prior to Descending  
Visual Impressions and Height Keeping at Low Altitude  
Effects of Speed and Inertia During Turns  
Effects of Wind and Turbulence

#### Low Level Operation:

Weather Considerations  
Low Cloud and Good Visibility  
Low Cloud and Poor Visibility  
Avoidance of Moderate to Heavy Rain Showers  
Effects of Precipitation  
Joining a Circuit  
Bad Weather Circuit, Approach and Landing

#### Airmanship

## **AIR EXERCISE 18B**

### **NAVIGATION AT LOWER LEVELS**

#### Low Level Familiarisation:

Entry/Exit Lanes and Areas Where Specific Local Rules Apply  
Actions Prior to Descending  
Visual Impressions and Height Keeping at Low Altitude  
Effects of Speed and Inertia During Turns  
Effects of Wind and Turbulence

Hazards of operating at low levels

#### Low Level Operation:

Weather Considerations  
Low Cloud and Good Visibility  
Low Cloud and Poor Visibility  
Avoidance of Moderate to Heavy Rain Showers  
Effects of Precipitation (forward visibility)  
Joining a Circuit  
Bad Weather Circuit, Approach and Landing

#### Airmanship

## LONG BRIEFINGS 18C

### USE OF RADIO NAVIGATION AIDS UNDER VFR

#### Objectives:

- a. use of VHF omni range
  - availability of VOR stations, AIP
  - signal reception range
    - selection and identification
  - radials and method of numbering
  - use of omni bearing selector (OBS)
  - To–From indication and station passage
  - selection, interception and maintaining a radial
  - use of two stations to determine position
- b. use of automatic direction finding equipment (ADF)
  - availability of NDB stations, AIP
  - signal reception range
    - selection and identification
  - orientation in relation to NDB
  - homing to an NDB
- c. use of VHF direction finding (VHF/DF)
  - availability, AIP
  - R/T procedures
  - obtaining QDMs and QTEs
- d. use of radar facilities
  - availability and provision of service, AIS
  - types of service
  - R/T procedures and use of transponder
    - mode selection
    - emergency codes
- e. Use of Distance Measuring Equipment (DME)
  - availability, AIP
  - operating modes
  - slant range
- f. Use of Aero Navigation systems, satellite navigation systems (RNAV – SATNAV)
  - availability
  - operating modes
  - limitations

### AIR EXERCISE 18C

#### RADIO NAVIGATION

- a. Use of VHF Omni Range
  - availability, AIP, frequencies
  - selection and identification
  - omni bearing selector (OBS)
  - to/from indications, – orientation
  - course deviation indicator (CDI)
  - determination of radial
  - intercepting and maintaining a radial
  - VOR passage
  - obtaining a fix from two VORs

- b. Use of automatic direction finding equipment (ADF) non-directional beacons (NDBs)
  - availability, AIP, frequencies
  - selection and identification
  - orientation relative to the beacon
  - homing
  
- c. Use of VHF direction finding (VHF/DF)
  - availability, AIP, frequencies
  - R/T procedures and ATC liaison
  - obtaining a QDM and homing
  
- d. Use of en-route/terminal radar
  - availability, AIP
  - procedures and ATC liaison
  - pilot's responsibilities
  - secondary surveillance radar
  - transponders
  - code selection
  - interrogation and reply
  
- e. Use of distance measuring equipment (DME)
  - station selection and identification
  - modes of operation
  
- f. Use of Aero Navigation systems, satellite navigation systems (RNAV – SATNAV)
  - setting up
  - operation
  - interpretation

## **LONG BRIEFING EXERCISE 19**

### **INTRODUCTION TO INSTRUMENT FLYING**

Objectives:

Flight Instruments

Physiological Considerations

Instrument Appreciation

Attitude Instrument Flight

Pitch Indications

Bank Indications

Different Dial Presentations

Introduction to the Use of the Attitude Indicator

Pitch Attitude

Bank Attitude

Maintenance of Heading and Balanced flight

Instrument Limitations (inc. System Failures)

### **ATTITUDE, POWER & PERFORMANCE**

Attitude Instrument Flight:

Control Instruments

Performance Instruments

Effect of Changing Power and configuration

Cross Checking the Instrument Indications

Instrument Interpretation

Direct and Indirect Indications (Performance Instruments)

Instrument Lag

Selective Radial Scan

## THE BASIC FLIGHT MANOEUVRES (FULL PANEL)

Straight and Level Flight at Various Airspeeds and Aeroplane Configurations

Climbing

Descending

Standard Rate Turns

Level	)	
Climbing	)	Onto Pre-Selected Headings
Descending	)	

## AIR EXERCISE 19

### INTRODUCTION TO INSTRUMENT FLYING

Physiological Sensations

Instrument Appreciation

Attitude Instrument Flight

Pitch Attitude

Bank Attitude

Maintenance of Heading and Balanced Flight

Attitude Instrument Flight

Effect of Changing Power and configuration

Cross Checking the Instruments

Selective Radial Scan

### THE BASIC FLIGHT MANOEUVRES (FULL PANEL)

Straight and Level Flight at various Airspeeds and Aeroplane Configurations

Climbing

Descending

Standard Rate Turns

Level	)	
Climbing	)	Onto Pre-Selected Headings
Descending	)	

## LONG BRIEFING EXERCISE 20

### BASIC NIGHT FLYING

A summary of points to be covered before sending the student on a first solo at night

Start up procedures

Local procedures - including ATC liaison

Taxiing

    Parking area and taxiway lighting

    Judgement of speed and distances

    Use of taxiway lights

    Avoidance of hazards – obstruction lighting

    Instrument checks

Holding point – lighting procedure

Initial familiarisation at night

Local area orientation

Significance of lights on other aircraft

Ground obstruction lights

Division of piloting effort – external/instrument reference

Rejoining procedure

Aerodrome lighting – Approach and runway lighting (including VASI and PAPI)

    Threshold lights

    Approach lighting

    Visual approach slope indicator systems

### NIGHT CIRCUITS

Take-off and climb

    Line up

    Visual references during the take-off run

    Transfer to instruments

    Establishing the initial climb

    Use of flight instruments

    Instrument climb and initial turn

The circuit

    Aeroplane positioning – reference to runway lighting

    The traffic pattern and lookout

    Initial approach and runway lighting demonstration

    Aeroplane positioning

    Changing aspect of runway lights and VASI (or PAPI)

    Intercepting the correct approach path

    The climb away

Approach and landing

    Positioning, base leg and final approach

    Diurnal wind effect

    Use of landing lights

    The flare and touchdown

    The roll out

    Turning off the runway – control of speed

Missed approach

    Use of instruments

    Re-positioning in the circuit pattern

## NIGHT NAVIGATION

- Particular emphasis on flight planning
- Selection of ground features visible at night
  - Air light beacons
  - Effect of cockpit lighting on map colours
  - Use of radio aids
  - Effect of moonlight upon visibility at night
- Emphasis on maintaining a 'minimum safe altitude'
- Alternate aerodromes – restricted availability
- Restricted recognition of weather deterioration
- Lost procedures

## NIGHT EMERGENCIES

- Radio failure
- Failure of runway lighting
- Failure of aeroplane landing lights
- Failure of aeroplane internal lighting
- Failure of aeroplane navigation lights
- Total electrical failure
- Abandoned take-off
- Engine failure
- Obstructed runway procedure

**IEM FCL 1.355**  
**Flight instructor rating (FI(A)) – Revalidation and renewal form**  
**See JAR–FCL 1.355**

<b>INSTRUCTIONAL FLYING EXPERIENCE</b> (See JAR–FCL 1.355(a)(1))				
<i>Instructors applying for revalidation of the Flight Instructor Rating should enter the instructional hours flown during the preceding 36 months.</i>				
SINGLE-ENGINE		MULTI-ENGINE		INSTRUMENT
DAY	NIGHT	DAY	NIGHT	
Total instructional hours (preceding 36 months):				
Total instructional hours (preceding 12 months):				

<b>FLIGHT INSTRUCTOR REFRESHER SEMINAR</b> (See JAR FCL 1.355(a)(2))	
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<b>1</b>	<b>This is to certify that the undersigned attended a Flight Instructor Seminar approved by the Authority</b>
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<b>2</b>	<b>Attendee’s personal particulars:</b>
----------	---

Name:	Address:
Licence number:	Exp. date of FI(A) rating:

<b>3</b>	<b>Seminar particulars:</b>
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Date/s of seminar:	Place:
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<b>4</b>	<b>Declaration by the responsible organiser:</b>
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*I certify that the above data are correct and that the Flight Instructor Seminar was carried out as approved by the Authority.*

Date of approval:	Name of organiser: (block letters)
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Date and place:	Signature:
-----------------	------------

<b>5</b>	<b>Declaration by the attendee:</b>
I confirm the data under 1 through 3	
Attendee's signature:	

<b>PROFICIENCY CHECK</b> <i>(See JAR-FCL 1.355(a)(3))</i>	
<i>.....(Name of applicant) has given proof of flying instructional ability during a proficiency check flight. This was done to my satisfaction.</i>	
Flying time:	Aeroplane/Sim. used:
Main exercise:	
Name of FIE:	Licence number:
Date and place:	Signature: