CHAPTER 13

TRAINING REQUIREMENTS AND SAFE TRAINING PRACTICES

13.1 GENERAL

13.1.1 This chapter prescribes the requirements applicable to each certificate holder for establishing and maintaining a training program for crew members, aircraft dispatchers and other operations personnel and for the approval and use of training devices in the conduct of the program as well as the contents of safe training practices.

13.2 TRAINING PROGRAM CURRICULUM

13.2.1 Further to the requirements of Chapter 7.3 Flight Crew Member Training Programmes, each certificate holder must prepare and keep current a written training program or curriculum for each type of aircraft with respect to dispatcher and each crew member required for that type of aircraft. The curriculum must include ground and flight training required by this chapter.

13.2.2 Each training program must include:

a) a list of principal ground training subjects, including emergency training subjects that are provided.

b) a list of all the training devices mockups, system trainers, procedures trainers or other training aids that the certificate holder will use.

c) detailed descriptions or pictorial displays of the approved normal, abnormal and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check indicating those maneuvers, procedures and functions that are to be performed during the in-flight portion of flight training and flight checks.

d) a list of aircraft simulators or other training devices approved, including approvals for particular maneuvers, procedures or functions.

e) the program hours or training that will be applied to each phase of training.

13.3 TRAINING PROGRAM AND REVISION

13.3.1 Initial Approval

To obtain initial approval, each certificate holder must submit to the DG, CAAN:

a) an outline of the proposed program or revision, including an outline of the proposed or revised curriculum that provides enough information for a preliminary evaluation of the proposed training program or revised training program; and

b) additional relevant information as may be requested by the DG, CAAN.

13.3.2 If the proposed training program or revision complies with this chapter, the DG, CAAN grants initial approval in writing after which the certificate holder may conduct the training in accordance with that program. The DG, CAAN then evaluates the effectiveness of the training program and advises the certificate holder of deficiencies, if any, that must be corrected.

13.3.3 Final Approval

The DG, CAAN grants final approval of the program or revision if the certificate holder shows that the training conducted under the initial approval mentioned above, ensures that each person that successfully completes the training is adequately trained to perform his assigned duties.

13.3.4 In granting initial or final approval of training programs or revision, including reduction in program hours specified in this chapter, the DG, CAAN considers the training aids, devices, methods and procedures listed in the certificate to holders curriculum that increases the quality and effectiveness of the teaching-learning process.

13.3.5 If approval of reduced program hours of training is granted, the DG, CAAN provides the certificate holder with a statement for the basis for the approval.

13.3.6 Whenever the DG, CAAN finds that revisions are necessary for the continued adequacy of a training program that has been granted final approval, the certificate holder shall, after notification by the DG, CAAN, make any changes in the program that are found necessary, within 30 days after the certificate holder receives such notice. However, if the DG, CAAN finds that there is an emergency that requires immediate action in the interest of safety in air transportation, he may, upon a statement of the reasons, require a change effective without stay.

13.4 GROUND INSTRUCTOR

13.4.1 No certificate holder may use a person to serve as a ground instructor for a course of training unless that person:

(a) In the case of pilots:

(i) has demonstrated his knowledge and capacity on teaching subject matter by conducting a ground class satisfactorily to the DG, CAAN and is cleared by DG, CAAN to act as an instructor for the ground training.

(ii) for all single-engine helicopters and multi-engine helicopters below 3180 kgs: holds a CPL with more than 1500 hours of flying experience in helicopters and 200 hours on type and successfully completes a Ground Instructor's course; and

(iii) for multi-engine helicopters with a MTOW of 3180 kgs or more, holds an ATP license with more than 2000 hours in helicopters and 200 hours as PIC on type and successfully completes a Ground Instructor's course.

(b) In the case of Engineers:

(i) has demonstrated his knowledge and capacity on teaching subject matter by conducting a ground class satisfactorily to the DG, CAAN and is cleared by DG, CAAN to act as an instructor for the ground training.

(ii) holds an Aircraft Maintenance License with at least three years experience and one year experience on type with an aviation organization applicable to the category; or

holding an Engineering degree of any discipline, with the appropriate type rating and having a work experience of at least three years with an aviation organization and whose affiliation with subject to instruct should be fit to satisfy the DG, CAAN.

Note-A pilot whose license is not current but has qualification and experience mentioned above also may be considered to be eligible to apply for a position of Ground Instructor.

13.4.2 In case of ground instruction for flight operation officer and personnel involved in dispatching aircraft, a pilot or a FOO license holder, with experience of not less than 3 years shall be eligible to conduct ground instruction, if his qualification and background is satisfactory to DG, CAAN.

13.4.3 In case of ground instruction for cabin attendants, a pilot or a FOO license holder or a cabin attendant, with experience of not less than 3 years shall be eligible to conduct ground instruction, if his qualification and background is satisfactory to DG, CAAN.

13.4.4 A ground instructor's authorization will have the duration of 24 months as the period of validity.

13.4.5 For the renewal of ground instructorship the applicant must produce an evidence of conducting a ground class of his subject at least once in a year.

13.4.6 RESERVED

13.4.7 For the renewal of ground instructor authorization, the applicant shall produce evidence of having conducted at least one class per year during the last two years.

13.5 PILOT TRAINING: Ground and Flight Training

13.5.1 Initial, Recurrent, Conversion and Upgrade Ground Training.

13.5.1.1 Initial, recurrent, conversion and upgrade ground training for pilots must include instruction in at least the following, as applicable, to their assigned duties :

a) General Subjects :

i) the certificate holders dispatch or flight release procedures.

ii) principals and methods for determining weight and balance, and runway limitations for take-off and landing (regulated take-off and landing weight)

iii) enough meteorology to ensure a practical knowledge of weather phenomena, including the principal of frontal systems, icing, fog, thunderstorms and high altitude weather situations.

iv) air traffic control systems, procedures and phraseology.

v) navigation and the use of navigation aids, including instrument approach procedures.

vi) normal and emergency communication procedures.

vii) visual cues prior to and during descent below DH or MDA; and

viii) other instructions as necessary to insure his competence.

b) For each aircraft type :

i) a general description.

ii) performance characteristics.

iii) engines and propellers.

iv) major components.

v) major aircraft systems, appropriate procedures and limitations.

vi) procedures for avoiding severe weather situations and for operating in or near thunderstorms, turbulent air, icing, hail, and other potentially hazardous meteorological conditions.

vii) operating limitations

viii) fuel consumption and cruise control.

ix) flight planning.

x) each normal and emergency procedure; and

xi) the approved aircraft flight manual.

13.5.1.2 Initial ground training for pilots must consist all the programmed hours of instructions in the required subjects specified in the above paragraph and approved by DG, CAAN.

13.5.2 Initial, Recurrent, Conversion, Upgrade and Differences Flight Training.

13.5.2.1 Initial, transition and upgrade training for pilots must include flight training and practice in the maneuvers and procedures set forth in Appendix 3 as appropriate.

13.5.2.2 The maneuvers and procedures required by the above paragraph must be performed in-flight or (except to the extent that certain maneuvers and procedures may be performed) in an helicopter simulator for which the user has received a User Approval from the DG, CAAN.

13.5.2.3 Minimum of 5 hours flight training is required for initial type conversion training in single-pilot helicopters.

13.5.2.4 Minimum of 6 hours flight training is required for initial type conversion and upgrade training in multi-pilot helicopters.

13.5.2.5 Minimum of 1 hour of recurrent or difference flight training in a single pilot helicopter or minimum 2 hours of recurrent or differences flight training in the case of multi-pilot helicopters.

13.5.2.6 Minimum of one hour for all types of helicopters for Pilot Proficiency Checks.

13.6 CABIN CREW; Initial, Recurrent, Conversion and Differences Ground Training

13.6.1 The initial, recurrent, conversion and differences ground training for cabin crew must include instruction in at least the following-

a) General subjects-

i) authority of the Pilot In Command

ii) passenger handling, including the procedures to be followed in the case of deranged persons or other persons or other persons whose conduct might jeopardize safety.

b) For each aircraft type-

i) A general description of the aircraft of the aircraft emphasizing physical characteristics that may have a bearing on ditching, evacuation and inflight emergency procedures and on other related duties.

ii) The use of both the public address system and the means of communicating with other crew members, including emergency means in the case of attempted hijacking or other unusual situations; and

iii) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.
iv) drilled and capable in the use of emergency and life saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment and first aid kits;
v) when serving on helicopter operated above 3000 m (10000 ft), knowledgeable as regards the effect of lack of oxygen and, in the case of pressurized helicopter, as regards physiological phenomena accompanying a loss of pressurization.
vi) aware of other crew members' assignments and functions in the event of an emergency so far as is necessary for the fulfillment of the cabin crew member's own duties;
vii) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin and has completed the dangerous goods training programme required by Dangerour Goods Handling Requirements of CAAN; and
viii) knowledgeable about human performance as related to passenger cabin safety duties including flight crew-cabin crew co-ordination.

13.6.2 Initial ground training for cabin crew must include a competence check to determine ability to perform duties and responsibilities.

13.6.3 Initial ground training for cabin crew must consist of all the programmed hours of instruction in the subjects specified asabove and approved by the DG, CAAN.

13.7 AIRCRAFT DISPATCHER; Initial and Recurrent Ground Training -

13.7.1 Initial and Recurrent Ground Training for aircraft dispatcher must include instruction in at least the following -

a) General subjects-

i) Use of communication systems including the characteristics of those systems and the appropriate normal and emergency procedures
ii) Meteorology, including various types of meteorological information and forecast, interpretation of weather data, (including forecasting of en route and terminal temperatures and weather conditions) frontal systems wind conditions and use of actual and prognostic weather charts for various altitudes
iii) The NOTAM system
iv) Navigational aids and publications
v) Joint dispatcher-Pilot responsibilities
vi) Characteristics of appropriate airports
vii) Prevailing weather phenomena and the available sources of weather information; and
viii) Air Traffic control and instrument approach procedures

b) For each aircraft type -

i) A general description of the aircraft emphasizing operating and performance characteristics, navigation equipment, instrument approach and communication equipment and procedures and other subjects having a bearing on dispatcher duties and responsibilities.
ii) Flight operations procedures including procedures specified
iii) Weight and balance computation
iv) Basic aircraft performance dispatch requirements and procedures,
v) Flight planning including track selection, flight time analysis and fuel requirements, and;
vi) Emergency procedures

13.7.2 Emergency procedures must be emphasized, including the alerting of proper government, company and private agencies during emergencies to give maximum help to an aircraft in distress.

13.7.3 Initial and recurrent ground training for aircraft dispatchers must include a competence check given by an appropriate supervisor or ground instructor that demonstrate knowledge and ability with the subjects mentioned in this chapter.

13.7.4 Initial and recurrent ground training for the aircraft dispatchers must consist of the programmed hours of instruction in the subjects specified in this paragraph and approved by the DG, CAAN.

13.7.5 Recurrent ground training for dispatchers must include at least :

a). the knowledge with respect to the aircraft type and

b). in the subjects required for initial ground training as appropriate in the form of a competency check.

13.8 FLIGHT INSTRUCTORS: Initial, Recurrent and Conversion Training

13.8.1 The initial and conversion ground training for Flight Instructors must include the following:

a) Flight Instructor duties, functions and responsibilities;
b) the applicable Civil Aviation Regulations and the certificate holder's policies and procedures.
c) the appropriate methods, procedures and techniques for conducting the required checks.
d) proper evaluation of pilot performance including the detection of:
   i) improper and insufficient training; and
   ii) personal characteristics that could adversely affect safety.
e) the appropriate corrective action in the case of unsatisfactory checks.
f) the approved methods, procedures and limitations for performing the required normal, abnormal and emergency procedures in the aircraft.

1338.2 The initial and transition flight training for pilot check airmen and instructors pilot must include the following :

a) enough in flight training and practice in conducting flight checks from the left and right pilot seats in the required normal, abnormal and emergency maneuvers to ensure his competence to conduct the pilot flight check and flight training required by this chapter.

b) the appropriate safety measures to be taken from either pilot seat for emergency situations that are likely to develop in training.

c) the potential results of improper or untimely safety measures during training.

15.8.3 Recurrent Training

a) Recurrent training of a Flight Instructor shall be considered to be fulfilled by a Pilot Proficiency Check in the case of a pilot whose license and rating is current.

b) In the case of a pilot whose license or rating is no longer valid, he shall complete an approved ground and flight recurrent training program that has been approved by the DG, CAAN and shall successfully complete a pilot proficiency check.

c) Recurrent Flight Training for Flight Instructors shall be as per 13.5.2.5.

13.9 FLIGHT ENGINEERS; Initial and Recurrent Flight training

13.9.1 Initial and recurrent flight engineers training programs must include at least the following-

a) Training and Practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either in flight or in an aircraft simulator.

b) A flight check that includes -

i) Preflight inspection
ii) Inflight performance of assigned duties accomplished from the flight engineer station during taxi, run-up, take-off, climb cruise, descent , approach and landings.
iii) Accomplishment of other functions, such as fuel management and preparation of fuel consumption records and normal and emergency or alternate operation of all aircraft flight systems, performed either inflight in an aircraft simulator or in a training device.

13.9.2 Flight engineers may complete the entire flight check in an approved helicopter simulator on type.

13.9.3 Initial flight training must include at least 5 hours of programmed flight training.

13.9.4 If the certificate holders approved training program includes a course of training utilizing an aircraft simulator or other training device, each flight engineer must successfully complete the followings:

a) training and practice in at least all of the assigned duties, procedures and functions required by this chapter; and

b) a flight check to a flight engineer level of proficiency in the assigned duties, procedures and functions.

13.9.5 Recurrent Ground And Flight Training must be Conducted Once Within a one Calendar Year.

13.10 INDOCTRINATION GROUND TRAINING

Crew Member, Flight Engineer And Dispatcher

13.10.1 Each training program must provide the following basic indoctrination ground training as appropriate to the particular assignment of the crew member or dispatcher:

a) duties and responsibilities of crew members or dispatchers, as applicable.

b) appropriate provisions of the Civil Aviation Regulations.
c) contents of the certificate holders operating certificate and operations specifications.

d) appropriate provisions of the certificate holders operating manual and

e) company manuals.

13.11 CREW MEMBER EMERGENCY TRAINING

13.11.1 Each training program must provide the emergency training set forth in this chapter with respect to each aircraft type model and configuration, each required crew member and each kind of operation conducted, in so far as appropriate for each crew member and the certificate holder.

13.11.2 Emergency training must provide the following :

a) instruction in emergency assignments and procedures, including coordination among crew members.

b) individual instruction in the location, function and operation of emergency equipment including :

i) equipment used in ditching and evacuation.

ii) first aid equipment and its proper use.

iii) portable fire extinguishers, with emphasis on type of extinguisher to be used on different classes of fire; and

iv) emergency exits in the emergency mode with the evacuation slide pack attacked (if applicable), with training emphasis on the operation of the exits under adverse conditions.

c) Instructions in the handling of emergency situations including :

i) rapid decompression.

ii) fire in flight or on the surface and smoke control procedures with emphasis on electrical equipment and related circuit breakers located in cabin areas including all galleys, service centers, lifts, lavatories and movie screens.

iii) ditching and other evacuation, including, the evacuation of persons and their attendants, if any, who may need the assistance of another person to move expeditiously to an exit in the event of an emergency.

iv) illness, injury, or other abnormal situations involving passengers or crew members; and

v) hijacking and other unusual situations.

d) review and discussion of previous aircraft accidents and incidents.

13.11.3 Each crew member must perform at least the following emergency drills and actually operate the following emergency equipment during initial and recurrent training on each type aircraft in which they are to serve :

a) each type emergency exit in the emergency and normal mode.
b) each type fire extinguisher.
c) each type of emergency oxygen system.
d) emergency evacuation including the use of a slide.
e) donning, use and inflation of individual floatation means, if applicable.
f) ditching, if applicable, including but not limited to, as appropriate :

i) cockpit preparation and procedures.
ii) crew coordination.
iii) passenger briefing and cabin preparation.
iv) donning and inflation of life preserves.
v) removal from the aircraft and inflation of each type raft.
vi) transfer of each type slide pack from one door to another.
vii) deployment, inflation and detachment from the aircraft of each type of slide.
viii) use of life lines.
ix) boarding of passengers into raft or slide pack.

g) crew members who serve in operations above 25,000 feet must receive instruction in the following :

i) respiration.

ii) hypoxia.

iii) duration of consciousness without supplemental oxygen at altitude.

iv) gas expansion.

v) gas bubble formation.

vi) physical phenomena and incidents of decompression.

13.12 DIFFERENCE TRAINING; Crew Members and Dispatchers

13.12.1 Differences training for crew members and dispatchers must consist of at least the following, as applicable to their assigned duties and responsibilities :

a) instruction in each appropriate subject or part thereof required for initial ground training in the aircraft unless the Director General finds that particular subjects are not necessary.

b) flight training in each appropriate maneuver or procedure required for initial flight training in the aircraft unless the Director General finds that particular maneuvers or procedures are not necessary.

c) the number of programmed hours of ground and flight training determined by the Director General to be necessary for the aircraft, the operator the crew member or the aircraft dispatcher involved.

13.12.2 Differences training for all variations of a particular type aircraft may be included in initial, transition, upgrading and recurrent training for the aircraft.

13.13 SAFE TRAINING PRACTICES

13.13.1 The goal of adherence of safe training practices by all pilots is to achieve an effective and safe level of pilot proficiency by practicing emergency procedures in a manner which will ensure that the practice does not become the real thing. Training beyond this level can be hazardous and unnecessary.

13.13.2 To preserve the highest degree of safety during training or checking, those conducting emergency exercises are to ensure that candidates are completely briefed on all aspects of the flight.

No sudden actions such as an engine shutdown or feathering are permitted. The check or training pilot shall state the exercise required i.e. "engine fire drill".

The pilots under training or checking shall complete the check in accordance with published Flight Manual Procedures and operator's Operating Procedures.

The flying pilot will primarily fly the aircraft and delegate duties to the non-flying pilot.

The non-flying pilot will act on the memory items then using the emergency written checklist, complete the remainder of the check.

Emergency procedures requiring the closing of a throttle, condition lever, mixture control, feathering of a propeller or shutting down of any major system must be confirmed by both pilots before the lever or switch is moved.

13.13.3 Activation of fire bar handles, fuel firewall shutoff valves, fuel/oil shutoffs etc. are to be SIMULATED only or activated above 5000' AGL.

13.13.4 Multiple emergencies, except those which follow logically from the first malfunction, shall not be completed at the same time.

13.13.5 It is not possible to compile safe training practices for all emergency procedures. Training sequences not specified may be conducted by training or check pilots. Common sense is essential in the preservation of flight safety.

13.13.6 Instrument checks should not be performed during an IMC or at night unless the aircraft is equipped with either approved thunderstorm detection equipment or approved airborne weather radar equipment.

13.14 TOLERANCE FOR CPL INITIAL AND RECURRENT CHECKS

PROFILE	CPL level skill test for initial endorsements	IR skill test and all other rating issues, revalidations and renewals
ALTITUDE OR HEIGHT		
Normal Flight	+/- 100 ft	+/- 100 ft
With simulated major emergency	+/- 150 ft	+/- 100 ft
Hovering IGE	+/- 2 ft	+/- 2 ft
Limited or partial panel	+/- 200 ft	+/- 200 ft
Starting go-around at decision alt/ht		+50 ft / -0 ft
Minimum descent altitude / height		+50 ft / -0 ft
'not below' minima (from FAF altitude down to MDA/H)		-0 ft
Circling minima		+100 ft / - 0 ft
TRACKING		
At all times when using a single-needle display	+/- 10^0	+/- 5^0
At all times when using a deviation bar display	Full scale deflection	Half scale deflection azimuth and glidepath (precision approach)
DME arcing		+/- 1 nm
HEADING		
Normal flight	+/- 10^0	+/- 5^0
With simulated major emergency	+/- 15^0	+/- 10^0
Limited or partial panel	+/- 15^0	+/- 15^0

SPEED		
Take-off and approach	+10 kts / -5 kts	+10 kts / -5 kts
Take-off and approach multi-engine	+/- 5 kts	+/- 5kts
All other flight regimes	+/- 10 kts	+/- 10 kts
Limited or partial panel		+/- 10 kts
With simulated engine failure		+10 / -5 kts
GROUND DRIFT		
Take Off hover IGE	+/- 3 ft	+/- 3ft
Landing	No sideways or backwards movement	+/- 2 ft vertical Zero feet rearwards or lateral flight

Notes : 1. Prevailing weather condition must be taken into consideration.
2. Guidelines on required maneuvers for an initial and recurrent pilot proficiency check are mentioned in Appendix B (helicopter).

13.15 RESERVED

13.16 GRADINGS SAMPLE

13.16.1 Grading Sample for Initial and Recurrent Trainings

Each exercise will be marked:

1 = Proficiency
2 = Normal Progression
3 = Additional Training Required
4 = Unsatisfactory
N/A = Not Applicable
D = Discussed and Simulated
T = Trained Check-Check not Required

13.16.2 Grading Sample for PPC and Check rides

(a) Satisfactory (S)- All exercises completed within tolerances.
A sequence shall be rated "satisfactory" if:

1. It contains minor errors only;
2. Airspeed control is acceptable for prevailing condition;
3. Altitude control is acceptable for prevailing condition;
4. Due to lack of experience, the candidate's flying is not as smooth and accurate as would be expected from an experienced on-type-candidate.
5. Rating of "satisfactory" on initial proficiency check (check-ride flights) is necessary for the endorsement by CAAN.
6. The applicant PUC shall not be permitted for flight check unless he successfully completes an oral examination on General Aerodynamics and Technical Knowledge related to the type of aircraft.

(b) Satisfactory with briefing (SB)- All exercises completed within tolerance but required briefing for minor errors.

A sequence shall be rated "satisfactory with briefing" if;

1. It is safe but contains minor errors due to misinterpretation of procedures and is repeated satisfactorily;
2. Aircraft control is safe but of a lower standard than would be expected;
3. An emergency procedure deviates from the check list but would not create a more hazardous situation if done in an actual emergency;
4. An approach, take-off, or landing briefing is not in accordance with the Company's Operations Manual or Company's Standard Operating Procedures;
5. A sequence deviates from Company's Standard Operating Procedures but can be corrected with a de-briefing.

(c) Unsatisfactory (US)- Exercises exceed tolerances and attempted gross error.

A sequence shall be rated "unsatisfactory" If:

1. Any attempt is made to follow a procedure which would violate an ATC clearance or endanger the aircraft;
2. An improper emergency procedure is used which would create a more hazardous situation than the original emergency.
3. The flight controls are grossly mishandled; or
4. Gross deviations in airspeed, altitude and direction occur.

Any unsatisfactory grading constitutes a failed check

Note- Any sequences that is recorded as "Satisfactory with Briefing" or" Unsatisfactory" shall be summarized in the space provided. Procedures may be repeated, if in the check pilot's view, the candidate can perform the sequence correctly the second time.

13.17 BRIEFING AND DE-BRIEFING PROCEDURES

13.17.1 Briefing:

A pre-flight briefing of the candidate is mandatory. It is expected that the candidate will fly the aircraft or simulator in accordance with the approved techniques and that he can do so within acceptable tolerances. The pre-flight briefing should therefore include the following:

a. The duration of flight test;

b. An outline of the proposed sequence of events;

c. The candidate should be prepared to demonstrate any procedure applicable to the aircraft, and will be expected to provide the initiative in response to any event;

d. It is anticipated that aircraft will be flown in accordance with:

i. Aircraft Flight Manual:

ii. Operations Manual Part D - Training;

iii. Company Operations Manual; and

iv. Standard Operating Procedures.

e. Simulated emergencies will be introduced during the flight; however, the safety of flight must not be jeopardized at any time. He is expected to complete all actions that can be completed in the simulator and indicate those actions that must be simulated in the aircraft. All simulated emergencies given by the check pilot in the aircraft will be prefixed by the word "simulated".

f. The candidate will not be subjected to multiple unrelated system failures, although related failures may be introduced to demonstrate specific emergency procedure, e.g. multiple engine failure, total hydraulic failure etc.

g. When conducting flight checks in a simulator, emergency situations caused by an inappropriate response by the candidate will not be corrected by the check pilot.

h. The simulated prevailing weather will be at or below minima for the approach being carried out.

i. If "Field-in-Sight" is not indicated by the check pilot, at the published approach minima, a missed approach procedure or other appropriate action is to be carried out.

13.17.2 De-Briefing:

a. Except where a candidate's ability is border lined and required considerable elevation, the candidate should always be advised at the conclusion of the flight test whether he has been rated "satisfactory" or "unsatisfactory".

b. If the check is "satisfactory", the candidate should be advised accordingly and de-briefed following the sequence of occurrence. When necessary, the candidate should be questioned to determine motive, reasoning and knowledge of a procedure before he is offered constructive criticism of a particular technique he has used. Criticism must always be given the correct emphasis, depending on its relative importance in the entire operation. Instance where the candidate indicates a particularly high standard of ability or demonstrates sound judgement, should be mentioned to balance the criticism.

c. If the check is "unsatisfactory", the candidate must be advised accordingly and the specific instances resulting in the assessment discussed. After discussion of the unacceptable points, the de-briefing should continue in the sequence of occurrence.

13.18 INSTRUMENT RATING

13.18.1 General requirement for check

Candidates will be evaluated on the accuracy of their general instrument flying, operational planning, adherence to ATC procedures and ability to execute let down and approach procedures to the standard required.

13.18.2 Equipment to be provided

(1) Instrument Flying Hood or suitable cockpit screens for simulated instrument flight shall be provided.

(2) Disks or other means for blanking out certain flight and navigation instruments shall be provided.

13.18.3 Standards

1. Descent below decision height (DH) or minimum descent altitude (MDA) will involve mandatory failure of the examination.

2. If one item of the flight examination (other than descent below minima) is failed by the candidate, this item may be repeated once. Should the candidate fail that item again, he will have failed the complete test.

3. Tolerance limit for flight maneuvers are intended for calm , stable air conditions. Due allowance for adverse weather conditions and aircraft type may be made by the examiner if so required.

13.18.4 Navigation Aids and Equipment

1. The aircraft used for examination shall be equipped with functioning instruments and equipment required by ICAO Annex 6 (operation of aircraft) section 6.9 and 6.10 as appropriate for flight under IFR conditions and at night.

2. The flight check will be conducted at an aerodrome or aerodromes equipped with VOR/DME and NDB approach facilities.

13.18.5 Lighting System

For the night rating, candidate should have additional thorough knowledge of aerodrome lighting system, navigational lighting system as well as cockpit and aircraft interior.

13.19 NIGHT FLIGHT QUALIFICATION

13.19.1 General Procedure

The Instructor Pilot will be responsible to explain each and every item and ensure that the student understands them well before commencement of night flight training.

a) As per requirements, the operator will initiate the night flight training to the pilot, who holds IR valid for the type of aircraft he is flying, in accordance with the training plan. Training and check should be conducted by night rated Instructor Pilot.

b) Briefing and de-briefing procedures will be conducted as mentioned in 13.17 of this section.

c) Items which will result in failure of the flight test at night is mentioned in 13.20

13.19.2 Essential Background Knowledge

a) The considerations with respect to night vision, aero-medical factors for night flying, how to adapt to reduced lighting, and the need to avoid exposure to bright light.

b) Airport beacons and runway lighting systems, turn-off points, taxiway lighting, strobes, VASIS threshold and runway and lighting, and obstruction light.

c) Additional considerations for the aircraft external line check:

(1) Position, landing and taxi-light serviceability check.
(2) Instrument lighting-proper level and adjustment.
(3) Serviceable flashlight, spare fuses.

d) The extra care necessary, due to deceptive speed illusion, for taxiing when ground references not visible and minima is reached.

e) The proposed flight training in its various stages emphasizing the extra care necessary when taxiing at night, systematic check, and the need to maintain sufficient generator/alternator output to meet the additions demands when taxiing lights and other night illumination is used.

f) For take-off, stress the basic similarity to that of a daylight take-off, except for the necessity to supplement visual references with instrument references to establish a safe climb-out.

g) For the approach and landing, emphasize how runway lights can be used to assess drift, constant approach angle, and as a landing reference to approach and runway light.

13.19.3 Advice to Instructor

a) Before commencing night flying, a student should be reasonably proficient in instrument flying.

b) Ensure the student is thoroughly aware of the entire airport lighting system. Review the lights and visual signals that could be expected from the control tower in the event of radio failure.

c) Insist on extreme care being taken while taxiing, due to the difficulty in estimating speed and distance.

d) Point out the importance of the generator or alternator charging rate as both radio equipment and lighting depend upon it.

e) Point out that night flying is a combination of visual and instrument flight and that the degree of instrument reference depends on the clarity of the horizon, or dependable ground lights.

f) Insist on the student keeping a sharp look-out for other aircraft at all times. Do not allow him to concentrate only inside the cock-pit.

g) The student should be given practice in landing with and without the use of a landing light.

13.20 FAILURE OF THE FLIGHT TEST

Following are the items which will result in failure of the flight test :

a) Failure to fly the aircraft within the prescribed tolerance.

b) Failure to check the flight instruments or radio equipment before flight.

c) Failure to check before flight or to use correctly in flight any one of the de-icing or anti-icing.

d) Failure to check the electrical charging systems before flight.

e) Failure to apply the correct altimeter setting.

f) Failure to check any vital action item contained in the appropriate check list provided by the manufacturer, which are vital to the safety of the aircraft being flown.

g) Failure to obtain ATC or simulated ATC clearances when necessary or to comply with such clearances

h) Failure to communicate with ATC using proper applicable terminology in both content and format, at any of the standard or requested reporting points except where reason for non-acceptance or non-compliance can be justified.

i) Failure to correctly select or identify the appropriate navigational aids.

j) Failure to follow the correct procedure in the event of communications failure.

k) Failure to identify failed engine.

l) By reason of lack of skill, knowledge or experience, he is unable to
   i) complete an orientation;
   ii) establish a holding pattern within the allocated airspace ; or
   iii) maintain control of the aircraft.