GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

OPP. SAFDARJUNG AIRPORT, NEW DELHI-110 003

CIVIL AVIATION REQUIREMENTS

SECTION 7 - FLIGHT CREW STANDARDS TRAINING AND LICENSING

SERIES 'B' PART XIX

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Subject: Requirement for undergoing Endorsement Training on aeroplanes used for Scheduled, Non-Scheduled and General Aviation Operations.

PURPOSE

1.1 Rule 41 of The Aircraft Rules, 1937 requires applicants for licenses and ratings to produce proof of having acquired the flying experience and having passed satisfactorily the test and examinations specified in Schedule II in respect of the license or rating concerned.

1.2 In order to standardize and streamline the process, this Civil Aviation Requirement provides the basic guidelines for pilots to undertake type rating training in various Approved Training Organisation (ATO) & operator with ATRP approvals for Scheduled, Non-Scheduled and General Aviation Operations.

1.3 The relevant rules and CAR's shall be complied with for the issue of licenses and Ratings.

1.4 This Civil Aviation Requirement has been issued under the provisions of Rule 133A of The Aircraft Rules 1937.

1.5 With the issuance of this CAR, the requirement of issuance of No Objection Certificate (NOC) by Flight Standards Directorate (FSD) of DGCA is hereby dispensed with.

2. APPLICABILITY

2.1 The provisions of this CAR shall apply to all Indian Pilot License Holders for undertaking type rating training at any Approved ATO in India or in any ICAO Contracting state and to operators with ATRP approval.

2.2 This CAR contains important information for both the applicant (trainee Pilot) as well as the ATO/ATRP.

2.3 The Pilot endorsement training syllabus is being issued to comply with the provisions of "CAR, Section 7, Series 'G', Part I, July 1999 – Requirements for issue of Indian licenses and aircraft ratings to pilots holding licenses and aircraft ratings issued by contracting states" for issue of pilot's licenses.

2.4 The pre-requisites or requirements shall be met, before undergoing the type training by both the Trainee Pilot and the ATO/ATRP Organization providing the training.

3. ACRONYMS

ATO	Approved Training Organization
ATRP	Airline Type Rating Programme
CBT	Computer Based Training
CCQ	Cross Crew Qualification
CRM	Crew Resource Management
CTR	Common Type Rating
Difference Level	A designated level of difference as defined in CS-FCD for the evaluation of pilot training, checking and currency
FFS	Full Flight Simulator
FSB	Flight Standardization Board
FSTD	Flight Simulation Training Device
LVO	Low Visibility Operations
MTOW	Maximum Take Off Weight
MPA	Multi-Pilot Aeroplane
NAA	National Aviation Authority
PPC	Pilot Proficiency Check
OM	Operation Manual
OPS	Operations
OSD	Operational Suitability Data (Flight Crew)
PF	Pilot Flying
PFD	Primary Flight Display
PIC	Pilot In Command
PM	Pilot Monitoring

Route Sector	Flight comprising take-off, departure, cruise of not less than 15 minutes, arrival, approach and landing.
SOP	Standard Operating Procedure
TPM	Training and Procedure Manual
TRE	Type Rating Examiner
TRI	Type Rating Instructor
ZFTT	Zero Flight Time Training

4. DEFINITIONS

4.1 “Approved training” means any training the curriculum of which has been approved by the Director-General.

4.2 “Approved training organization (ATO)” means an organization approved by and operating under the supervision of a Contracting State in accordance with the requirements of Annex 1 to perform approved training.

Note: The Contracting State is required to ensure that the ATO is included in the State’s ongoing safety oversight programme.

4.3 "Approved" means accepted by the Director-General as suitable for a particular purpose.

4.4 "Contracting State" means any State which is for the time being a party to the Convention on International Civil Aviation concluded at Chicago on December 7, 1944, and any amendment which may be made thereto under the provisions of Article 94 thereof.

4.5 “Endorsement” with respect to a licence means an entry in the licence indicating the privileges which the licence holder is entitled to exercise, including any observation impacting the exercise of such privileges.

4.6 “Flight Simulator” means a device which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic and the like, aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated.

4.7 “Flight Simulation Training Device” means a Full Flight Simulator, Flight Training Device, Flight Navigation Procedures Trainers or Basic Instrument Flight Trainer in which flight conditions are simulated on the ground.

4.8 “Foreign ATO” means an approved training organization (ATO) located outside of India.

4.9 "Licence" means a licence issued under The Aircraft Rules, 1937.

4.10 "Operator" means a person, organisation or enterprise engaged in or offering to engage in aircraft operation.

4.11 "Rating" means an authorization entered on a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

4.12 "Type of aircraft" means all aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handing or flight characteristics.

4.13 "Type rating" means a rating for each type of aircraft.

5. GENERAL REQUIREMENTS

5.1 The Training Institute / facility and its simulators shall be approved by the State Regulatory Authority of concerned ICAO Contracting State. Prior to commencement of training, the ATO / operator with ATRP approval shall ensure that the training requirements are accomplished and required documents are submitted on completion of type rating course in accordance with this CAR to the Director of Training and Licensing, DGCA.

5.2 The license and medical of the trainee pilot need not be current and valid during the training and checks on simulators, however the license and medical must be current for all training/checks on aeroplanes.

5.3 The trainee pilot shall pass both the DGCA technical specific and performance (if applicable) examination or the ATO examination authorized by the regulatory authority of the relevant contracting state. The trainee pilot should have passed all requisite written examinations before commencement of the FSTD training and that must be valid during entire training and checks.

5.4 Where training is done overseas, Ground and simulator training shall be completed in the same ATO. If the trainee wishes to undertake ground training at a different ATO prior permission shall be obtained from DGCA (FSD) which will only be considered when ground/Simulator training facilities do not exist in India. In such case the trainee shall pass the DGCA technical examinations.

5.5 The applicable Skill Test (Day/Night) and IR/PPC Check forms, including CA 40/41 as applicable, shall be used. The forms shall be as available on the DGCA website and/or as notified by DGCA from time to time.

5.6 The skill tests of the trainee pilot shall be carried out by a State Regulatory

Authority Examiner, other than those who had imparted the training.

Note: Examiners shall not conduct skill tests or assessments of competence for an applicant if they have provided more than 25% of the required instruction or the final instructional session for the rating being tested.

5.7 Training and checks must be carried out with State Regulatory Authority Approved Instructor(s) and Examiner(s) only

5.8 The type rating training shall be conducted as per the syllabus stipulated in Appendix A of this CAR.

5.9 In case of any clarification is required, FSD at DGCA may be contacted.

6. RESPONSIBILITY OF SUBMISSION OF DOCUMENTS FOR ENDORSEMENT

6.1 The Operator shall upload a consolidated set of all training documents through the eGCA portal for verification of the authenticity of the documents and the training undertaken, in accordance with the procedure prescribed by DGCA.

6.2 The applicant shall upload the following original documents on the eGCA portal.

a. Ground training & tests records.

b. Training reports (session wise) of simulator/aeroplanes training, tests, and checks, including any additional/remedial training imparted.

c. Valid State Regulatory Authority approval of ATO.

d. Proof for validity of the Instructor/Examiner as applicable.

e. State Regulatory Authority qualification certificate for all FSTDs used in the training program.

f. All other documents required in accordance with the Aeroplane Rules of 1937 and CAR for the purpose of endorsement.

7. The syllabus for various Aeroplanes (Listed in table A) has been standardised, and Appendix A describes the quantum of type rating training applicable to different type of aeroplanes.

8. The type rating course for the relevant aeroplane type shall be conducted either in accordance with the applicable OSD/FSB document, where available and course duly approved by DGCA in the respective OM/TPM, or in accordance with the requirements prescribed in this CAR in Appendix A.

Table A:

Type A	Commercial Jet Aeroplanes (Narrow body & Wide body) such as A 318/319/320/321/ 330/ 340/ 350/ 380 B 737-4/5/6/7/8/900, B747/ B757/ B777/ B787 etc. Embraer 170 and above, CRJ etc.
Type B	Turbo Prop Aeroplanes above 5700 Kg such as ATR, Q400, Dornier and other aircraft of similar type
Type C	Other Jet Aircrafts which are not specified in Type A & B above such as Challenger, Gulf Stream, Global, Falcon, Citation, Phenom series and all other similar aircrafts.

Note 1: This list of aeroplanes given above is only indicative and by no means exhaustive. For any further understanding on the matter, please contact FSD, DGCA.

Note 2: The type rating course for the relevant aeroplane type shall be conducted in accordance with the applicable OSD /FSB document, where available and the course shall be duly approved by DGCA, subject to verification of the organisation's training infrastructure and capability of FSTD.

Note 3: In cases where (OSD)/FSB for a particular aircraft type or variant is not available or the proposed course has not been approved by DGCA, the provisions and requirements stipulated in this CAR shall be applicable and complied with in full.

Note 4: The approved type rating training programme, including all mandatory training, simulator sessions, LOFT and skill test/IR-PPC checks, shall be completed within 45 working days from the date of commencement of training, unless otherwise approved by DGCA with documented justification.

Vir Vikram Yadav
Director General of Civil Aviation

APPENDIX A

S.NO.	TRAINING/CHECK	DESCRIPTION OF TRAINING/CHECK	TYPE A	TYPE B	TYPE C
1.	Pre-requisite Qualification	Minimum Hours/License Requirements	• CPL with IR • The applicant will be required to meet the multi-engine requirements as laid down by OEM if any.		
2.	MCC/JIT	Theoretical Knowledge	12 Hours	12 Hours	12 Hours
		FSTD Training (Minimum FTD Level 5)	20 Hours	12 Hours	20 Hours
		Note 1: The MCC/JIT syllabus prescribed in this Appendix shall apply where MCC/JIT training is integrated with an initial type-rating course. **Note 2:** Where MCC training is conducted as a standalone course, the requirements prescribed in Appendix B shall apply. **Note 3:** MCC/JIT training satisfactorily completed and certified in accordance with the applicable requirements need not be repeated for a subsequent type rating.			
3.	Ground Training	Theoretical Knowledge	72 Hours	72 Hours	54 Hours (or as stipulated by the OEM whichever is higher)
		Notes: The Ground Training is recommended for 06 hours but should not be more than 08 hours in a day. The approved type rating training course shall include, at a minimum, all mandatory training elements specified in the applicable OSD/FSB document for the relevant aircraft type. 72 Hours of Ground Training shall include Technical and performance training only. There should not be any FFS simulator Sessions during the ground training period. A “home study” is not approved and no credit shall be provided for the same. Credit shall be granted only for Approved Computer-Based Training (CBT) that forms part of the duly approved type rating training course.			

			05 Hours*	05 Hours*	05 Hours*
4	UPRT	Theoretical Knowledge (Initial UPRT Training)	Notes: (UPRT) Upset Prevention and Recovery Training. Applicable for first type rating only. UPRT training to be completed as per the training manual of DGCA approved ATO/operator with ATRP approval. UPRT ground and simulator syllabus shall be completed in the same ATO/with same ATRP (If approved) *The training courses shall include UPRT theoretical knowledge and flight instructions related to the specificities of the relevant type, as defined in the relevant OSD/FSB or 5 Hours if not defined whichever is higher. For ATOs without DGCA approval, UPRT approval should be mentioned in the State Regulatory Authority approval of the ATO. In case of the ATO/operator with ATRP approval does not have UPRT compliant simulators, the individual may complete the UPRT syllabus in an alternate approved ATO.		
5	UPRT	FSTD TRAINING	The UPRT course shall be completed at an ATO/ Operator with ATRP approval and shall comprise at least: (1) preflight briefings and post flight debriefings; and (2) MINIMUM OF 2 hours of PF flight instruction with qualified instructor. (3) UPRT FSTD Sessions may be sequenced after completing minimum required FFS sessions for Type Rating.		
6	Examination		Minimum 70% Pass marks (or Higher if stipulated by ATO/Operator) An exam on technical specific and performance subjects (if applicable) shall be conducted by the ATO /operator with ATRP approval on completion of Ground Training. The certified marked answer sheets and tests should be uploaded on the eGCA portal (Not applicable in case the trainee has passed the DGCA technical specific and performance examinations)		

<table>
<tr><td rowspan="2">7</td><td rowspan="2">Simulator Training</td><td rowspan="2">FSTD Training</td><td>08
Sessions</td><td>08
Sessions</td><td>06
Sessions
(or as stipulated by the OEM whichever is higher)</td></tr>
<tr><td colspan="3">Notes:

FSTD training sessions to be undertaken after successful completion of all above or as mentioned.

Each session, briefing and de-briefing, will be of appropriate duration with a minimum as given in the OSD/FSB or as approved in OM/TPM.

A trainee shall not be scheduled for, or undertake, more than one FFS training session within any period of 24 consecutive hours.

Training objective of each session shall be achieved, and the trainee shall be given appropriate additional training till the minimum level of proficiency is achieved.

The records of each simulator session with de-briefing remarks shall be certified by the trainer.

CRM and TEM are to be integrated into all practical exercises.

Each Session shall be of at least 04 Hours, of which 02 hours shall be PF and 02 hours as PM.

The OSD/FSB type rating footprint establishes the minimum training requirements which shall be met, and the ATO/Operator may increase the training footprint and get it approved as required.

FFS credits will be given to FSTD minimum Level 5 or above (device must be approved by DGCA) or as defined by the OEM. FSTD used in place of FFS must accurately replicate the cockpit environment, operations and aeroplane response. However, Minimum 06 sessions shall be conducted on FFS (Level D). Training Program shall be Approved in the Operator’s OM/TPM.

CBTA Curriculum as Per OM/TPM (If approved)</td></tr>
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<table>
<tr><td rowspan="2">8</td><td rowspan="2">LOFT</td><td rowspan="2">FSTD Training</td><td>01
Session</td><td>01
Session</td><td>01
Session</td></tr>
<tr><td colspan="3">Notes:

A minimum of one LOFT session as Pilot Flying (PF) on a minimum of Level “C/D” FFS.

The requirement to conduct LOFT will be as per the OSD/FSB for the relevant type of aircraft, however, the ATO/Operator may include the same in the type rating footprint and get it approved as required.</td></tr>
<tr><td rowspan="2">9.</td><td rowspan="2">SKILL TEST</td><td rowspan="2">FSTD Training</td><td>02 hours
(Day/Night) *</td><td>02 hours
(Day/Night) *</td><td>02 hours
(Day/Night) *</td></tr>
<tr><td colspan="3">Notes:
After completion of the above training, the trainee pilot shall undergo the indicated sessions of SKILL TEST DAY/NIGHT (with an examiner other than the one who imparted training. (Refer para 5.6) in a level “D” FFS.

* Check conducted on FSTD: One check of minimum 02 hours PF including Day and Night, both.IR PPC checks can be combined with skill test.

Check conducted on aero plane: Two checks (One by Day and one by Night as per relevant Category).IR PPC checks can be combined with skill test.

Skill Test (D/N) is a mandatory regulatory requirement for the successful completion of type rating.</td></tr>
<tr><td>10</td><td>Other Training</td><td>Ground Training/FSTD Training</td><td colspan="3">All other training as required such as LVTO / ZFTT / Base Training, Differences or Familiarization training, CRM, SEP, DGR training etc. that are required and relevant as per the existing guidelines in various CARs shall be completed before exercising the privileges of the rating. These trainings except Base Training (Aircraft Familiarization) may also be conducted before skill tests.</td></tr>
<tr><td colspan="6">NOTE: License may be submitted for endorsement on successful completion of the above.</td></tr>
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APPENDIX B

Multi-crew cooperation (MCC) training course

1. The objectives of MCC training are to develop the technical and non-technical components of the knowledge, skills and attitudes required to operate a multi crew aircraft.
2. The MCC training course should comprise both theoretical and practical elements and should be designed to achieve the training objectives.
3. The MCC course shall consist of the following:
   (a) Basic MCC training;
   (b) Advanced Gas Turbine aeroplane training;
   (c) Advanced airline operations scenario training; and
   (d) Final assessment.
4. CRM shall be integrated into all practical exercises of the MCC course.
5. Threat-and-error management (TEM) is central to the course instruction; the concepts of threat anticipation, threat recognition, recovery to safe flight, error management, and consequent avoidance of undesired aeroplanes states shall be emphasized at all times.
6. Duration

TRAINING OBJECTIVES	TRAINING REQUIRED
6.1 BASIC MCC TRAINING *(Mandatory if flying in multi pilot environment)	• 25 Hours of Ground School • 05 FSTD (20 Hours) (10 hours if done on same FFS type as used in type rating) • Sessions (Minimum FTD level 5, and above)
6.2 ADVANCED GAS TURBINE AEROPLANE TRAINING *(Mandatory for Type A and Type C Aeroplanes)	12 Hours
6.3 ADVANCED AIRLINE OPERATIONS SCENARIO TRAINING* *(For ATRP candidates only)	6 Hours
6.4 FINAL ASSESSMENT	2 Hours

(a) The MCC training course shall be completed within 6 months at an ATO.

(b) On completion of the MCC training course the applicant shall be given a certificate of completion for each module that was successfully completed.

(c) **An FTD LEVEL 5 (minimum)** or an equivalent FSTD that has a similar visual cueing system to the FFS may also be acceptable provided that the device is representative of the same class of multi-pilot, multi-engine aeroplanes specified in terms of passenger load, mass, and performance, and equipped with equivalent aeroplanes systems and avionics functionality.

(d) Defence Pilots who have operated in a multi crew environment in a transport category aeroplane need not undergo the Basic MCC Training (6.1).

(e) Defence Pilots who have flown a gas turbine powered aeroplanes (Turbojet or Turbofan) need not undergo the advanced gas turbine aeroplanes training (6.2).

Note 1: Defence pilots are qualified pilots as defined in Rule 41 of the Aircraft Rules, 1937. The final assessment as given in Para 6.4 does not apply to Defence pilots if they satisfy both Para (d) and (e) as given above.

Note 2: The ratio of PF and PM during MCC training shall be 50:50

7.

BASIC MCC TRAINING			
Training Elements	**Performance indicators**	**Knowledge**	**Practical Exercises**
Monitoring and cross-checking	(a) Monitor and cross-check all actions; (b) Monitor aeroplanes trajectory in critical flight phases; (c) Take appropriate actions in response to deviations from the flight path.	(a) SOPs; (b) Aeroplanes systems; (c) Undesired aeroplane states.	In a commercial air transport environment, apply multi-crew procedures, including principles of TEM and CRM to the following: (a) Pre-flight preparation: (1) FMS Initialisation. (2) radio and navigation equipment preparation; (3) flight documentation;
Task sharing	(a) Apply SOPs in both PF and PM roles; (b) Make and respond to standard callouts.	(a) SOPs	
Use of Checklists	(a) PF and PM roles; (b) SOPs	(b) Checklist philosophy.	

Briefings	Prepare and deliver appropriate briefings.	(a) SOPs; (b) Interpretation of FMS data and in-flight documentation.	(4) Computation of take-off performance data. (b) Take-off and climb: (1) before take-off checks; (2) normal take-offs; (3) rejected take-offs; (4) take-offs with abnormal and emergency situations included. (c) Cruise: emergency descent. (d) Descent and approach: (1) instrument flight procedures; (2) holding; (3) 3D Operations using raw data; (4) 3D Operations using Flight Director; (5) 3D Operations using autopilot; (6) one-engine-inoperative approach; (7) 2D Operations (8) Computation of approach and landing data; (9) All engines go-around; (10) Go-around with one engine inoperative; (11) Windshear during approach. (e) landing:transition from instrument to visual flight on reaching decision altitude or
Flight management	(a) Maintain a constant awareness of the aeroplanes automation state; (b) Manage automation to achieve optimum trajectory and minimum workload; (c) Take effective recovery actions from automation anomalies; (d) Manage aeroplanes navigation,terrain clearance; (e) Maage aeroplanes fuel state and take appropriate actions	(a) Understanding of aeroplanes performance and configuration; (b) Systems; (c) SOPs; (d) Interpretation of FMS data and in - flight documentation; (e) Minimum terrain clearance; (f) Fuel management.	

			height or minimum descent altitude or height; (f)after landing and post flight procedures; (g) selected emergency and abnormal procedures.
FMS use	Programme, manage and monitor FMS in accordance with SOPs.	(a) Systems (FMS); (b) SOPs; (c) Automation.	
Systems normal operations	Perform and monitor normal systems operation in accordance with SOPs.	(a) Systems; (b) SOPs.	
Systems abnormal and emergency operations	(a) Perform and monitor abnormal systems operation in accordance with SOPs; (b) Utilize electronic and paper abnormal checklists in accordance with SOPs.	(a) Systems; (b) SOPs; (c) Emergency and abnormal procedures and checklists; (d) Recall items	

Environment, weather, and air traffic control (ATC)	(a) Communicate effectively with ATC; (b) Avoid misunderstandings by requesting clarification; (c) Adhere to ATC instructions; (d) Construct a mental model of the local ATC and weather environment.	(a) Systems; (b) SOPs; (c) ATC environment and phraseology; (d) Procedures for hazardous weather conditions.	

8. Advanced gas turbine aeroplanes flying training

The student pilot should develop a flight path management competency, including energy management, as pilot flying (PF), and associated active monitoring skills as pilot monitoring (PM). Aeroplane procedures used during this training should develop the student pilot's understanding of the aero plane flight envelope and inertia, as well as of the relationship between thrust and attitude. This phase should include an introduction to prevention and recovery of upsets, which builds confidence, skill, and resilience.

ADVANCED SWEPT-WING JET AEROPLANE TRAINING			
Training Elements	**Performance Indicators**	**Knowledge**	**Practical Exercises**
Advanced gas turbine aero plane flying training	(a) Understand and apply combinations of thrust and attitude that ensure a stable, safe flight in various aero plane configurations and altitudes. (b) Manage the (much) wider range of speed and thrust at both low level and high level. (c) Demonstrate good judgement and correct use of lift and drag devices during various phases of the flight. (d) Use displays along with all available aids to stay mentally ahead when piloting all profiles. (e) Understand and recognize the precursors of high-energy approaches. (f) Know angle-of-attack (AoA) versus attitude indications at low level as well as at high level. (g) Practice upset prevention as a priority, and clearly recognise when and how recovery is necessary, by using the required pilot skills to mitigate loss of control in-flight (LOC-I) events.	Elements and components of jet orientation: (a) glass cockpit displays; (b) propulsion; (c) aerodynamics; (d) flight controls; (e) performance; (f) jet flight planning; (g) weight and balance; (h) basic jet flying; (i) pilot techniques for jet flying, advanced-handling-skills development; (j) flight path management; (k) auto flight; (l) high-altitude operations; (m) Introduction into prevention and recovery of upsets.	(a) Take-off, approach, landing, go-around. (b) Flight deck management practices. (c) Complex problem-solving techniques. (d) Advanced handling. (e) Manual handling skills (no autopilot, no auto thrust, and where possible, no flight director). (f) Flight at different speeds, including slow flight and altitudes within the normal flight envelope. (g) Steep turns. (h) Aeroplanes stability and stall awareness. (i) Upset prevention techniques and approach-to-stall recovery events (appropriate to FSTD limitations and capabilities). (j) High-energy approach prevention. (k) Go-around management of approach and landing configurations.

9. Advanced airline operations scenario training

The student pilot should be trained to apply the core competencies to conduct a safe and efficient operation in realistic airline operations scenarios. The airline-representative scenarios should include normal and non-normal situations. Operations should be run in real time according to a typical schedule. The scenarios should be constructed in an airline context in order to emphasize the following:

(i) Threat-and-error management (TEM);
(ii) Crew resource management (CRM);
(iii) Flight path management, including energy management; and
(iv) Interaction with internal and external stakeholders in the resolution of scenarios.

ADVANCED AIRLINE OPERATIONS SCENARIO TRAINING			
Training Elements	**Performance Indicators**	**Knowledge**	**Practical Exercises**
Advanced airline operations scenario training	(a) Execute pre-flight preparation in accordance With airline or OEM SOP's. (b) Conduct an effective crew briefing, including cabin crew managers (CCMs). (c) Display good airmanship and TEM skills in assessing aeroplane serviceability, weather planning, fuel planning, and destination facilities. (d) Conduct cockpit preparation and briefings in an effective and accurate manner. (e) Manage and execute engine start, taxi-out and pre-take-off checks safely and in accordance with airline or OEM SOPs. (f) Manage and execute runway line-up, take-off, climb, cruising, descent, approach, landing and taxi-in safely and in accordance with	(a) Knowledge of systems (b) SOPs. (c) Normal and non-normal checklists and procedures.	(a) check-in procedures. (b) pre-flight preparation: (1) weather analysis; (2) flight planning; (3) fuel planning; (4) configuration deviation list (CDL), dispatch deviation procedures guide (DDPG), and minimum equipment list (MEL) analysis; and (5) Cabin crew briefing. (c) normal procedures: Cockpit preparation, pushback, engine starting, taxiing, take-off, climb, cruising, descent, landing, shutdown, and disembarkation procedures.

	airline or OEM SOPs. (g) During non-normal operations, display good system knowledge, and apply non- normal procedures, communications, TEM, situational awareness (SA), decision-making and aero plane handling.		(d) on time performance: (1) weather analysis; (2) flight planning; and (3) fuel planning. (4) non-normal procedures: (1) as per (c) above, in case of a technical or operational non-normal event; (2) TEM; (3) diversion decision-making; (4) communication; (5) diversion; (6) fuel SA; and (7) Passenger and crew care.