REPORT OF THE

'EXPERT COMMITTEE'

System Of Examination And Licensing Of Personnel

15th July 2011

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1. PREFACE

As a follow-up to the statement made by the Hon'ble Minister for Overseas Indian Affairs and Civil Aviation on 15.03.2011 in the Rajya Sabha regarding issue of Pilot Licenses, Ministry of Civil Aviation vide Order No. A.60015/044/2011-DG dated 29th March 2011 constituted an Expert Committee to look into the current system of examination and licensing of pilots and make recommendations to make the system secure, credible and efficient and in line with modern and best practices. (Attached at Appendix 'A')

The Expert Committee comprised of the following members:

1. Shri E.K. Bharat Bhushan, Director General of Civil Aviation
2. Shri Vipin Sharma, Director Engineering and SBU Head, Air India
3. Capt. A.K. Govil, ED (Ops), Air India
4. Prof. Lajpat Rai, Head, Institute of Technology and Management (former IIT Delhi)
5. Capt. Rohinton Bhappu, Member, CASAC
6. Shri Mahesh Chandra, DDG, N IC
7. DG Inspection and Safety, Air Hqrs. Representative
8. Dr. Sanat Kaul, former Representative of India in ICAO
9. Shri Rohit Nandan, Joint Secretary, MoCA – **Convener**

Terms of Reference:

1) To examine the current system of examination of pilots, engineers etc., and make recommendations to make examination system secure, credible and efficient and in line with modern and best practices;

2) To examine introduction of electronic technology, online examination and make recommendations;

3) To examine the current system of licensing, procedure and processes and make recommendations for improvement;

4) To examine and make recommendations for introduction of effective system of cross-verification of documents of licensing filed by candidates;

5) Any other task assigned by the Ministry.

In all, the Committee held three meetings to study the examination and licensing

system of DGCA and to make recommendations for its improvement. The minutes of the meetings are attached at Appendix 'B'.

The Committee members were provided relevant rules and regulations including laid down procedures followed for the licensing and examination of personnel. List of these rules, regulations and procedures have been attached at Appendix 'C'.

During the course of the meetings held, the Committee members were apprised of the initiatives taken by DGCA to improve the Licensing and Examination process. These have been listed at Appendix 'D'.

2.   EXAMINATION SYSTEM

Integrity of Examination System

The Committee carried out a review of the existing Examination System of pilots and engineers to identify the constraints and weaknesses in the system.

Examination for the issue of licenses in respect of pilots, engineers including pilots holding foreign license are conducted by Central Examination Organization (CEO). CEO has well defined procedures to ensure integrity of the examination system and is presently conducting paper based (OMR) examinations. DGCA is aware of the constraints of a paper based examinations which is highly dependent on availability of adequate number of human resources and has already taken initiative to have a computer based examination system. National Informatics Centre (NIC) is developing a software application for conducting computer based examination. The application is in its final stages of preparation and testing.

During the first meeting, a detailed explanation on the process of examination was provided to the Committee members.

CEO follows a well laid down procedure for the registration, verification of the documents, generation of computer number of the candidates etc. On registration, a computer number is generated in respect of a candidate. This is a permanent number and all examination records of a candidate can be traced with the help of his computer number. DTL, at the time of issue of license, verifies the qualification which leads to loss of time.

Recommendation 1: **The Committee considers that examination conducted by CEO is part of the licensing process and should have the responsibility to initiate some of the processes which are presently being undertaken by the Licensing Directorate. Processes involving verification of basic qualification should therefore be initiated by CEO at the time of issue of Computer No. so that the same is completed by the time the candidate becomes eligible for issue of licence.**

Introduction of Electronic Technology

The Committee felt that there is a need to make use of electronic technology in the examination system.

Recommendation 2: **In this regard, the Committee makes the following recommendations:**

1.   DGCA should adopt   computerization of all the activities related to the examination including online registration for examination, allotment of roll number, scheduling of examination dates, conduct of online/ computer-based examination, processing and declaration of result.

2.   DGCA has already taken initiative for recommendation at S. No. 1 above, should therefore go in examination in a phased manner starting with ATPL exam.

3.   In order to avoid instances of impersonation during conduct of examination, verification of the candidate's identity by use of biometrics is suggested.

Availability of infrastructure

The Committee reviewed the initiative taken by DGCA for computer based examination system. The system was discussed in detail and while the pre-examination (L1) and post examination (L3) activities did not seem to have many issues, the L2 activity which includes the actual conduct of examination was reviewed for its adequacy. In this regard, constraints faced by DGCA in relation to lack of infrastructure i.e. adequate space for conducting online examination including computer terminals etc. were discussed.

Recommendation 3: **The Committee reviewed the preparation of software application by NIC in this regard and makes the following recommendations:**

1.   In ideal situation, the best option would be to have an end-to-end solution wherein software application and infrastructure for conduct of computer based examination is provided by one agency.

2.   Since at present NIC is already in advanced stages of preparing the software application, DGCA should opt for hiring of infrastructure of an agency for conducting examination using the software application prepared by NIC.

3.   In future, DGCA should consider outsourcing the entire examination system, subject to all security precautions being ensured. In this regard, DGCA should review the examination system being followed internationally by various regulatory authorities.

Frequency of Examination

Flight Crew Examinations are conducted by Central Examination Organization (CEO). There are normally four sessions in a year during the months of January, April, July and October. In addition, special examinations are also conducted to facilitate candidates to complete their written examinations so that they can fulfill the requirement for issue of license as per Aircraft Rules.

The technical and other examinations for the issue of all licenses are required to be completed within a period of two and a half years immediately preceding the date of application for the issue of such licenses except for issue of Commercial Pilot's License (CPL) and Airline Transport Pilot's License (ATPL) for which such period is five years.

> **Recommendation 4:** **The above validity of two and a half years and five years was considered to be adequate, however, the Committee observed that a candidate should be given the flexibility to appear for examination as per dates of his choice as is done in most of other countries. To be able to do this, the present system of paper examination needs to be discontinued and online computer based examination introduced. Further, DGCA should consider placing restrictions on the number of attempts for appearing in the pilot examination.**

Special Examination

Flight Crew Examinations are conducted by Central Examination Organization (CEO). There are normally four sessions in a year during the months of January, April, July and October. In addition, special examinations are also conducted to facilitate candidates to complete their written examinations so that they can fulfill the requirement for issue of license as per Aircraft Rules. These Special Examinations are conducted for those candidates who have completed all requirements for issue of Pilots License except passing of one written paper. These examinations are conducted in the months of March, September and December each year.

The Committee was informed that DGCA has now discontinued holding special examinations. Also with the introduction of online/ on demand examination system, the need to have special session examination would automatically go away.

Uncertainty of syllabus and reference material

The Committee reviewed the existing syllabus prescribed by DGCA and it was concluded that DGCA should review the existing syllabus.

The Committee was informed by DGCA that a revised draft syllabus for pilots has already been prepared and published for inviting comments in December 2010. It was further informed that a Committee consisting of DGCA officials and industry has reviewed the comments received on the draft syllabus. The Committee was informed that the finalized syllabus will soon be placed on DGCA's website.

At the time of finalizing this report, the revised syllabus has been placed on the DGCA's website.

Recommendation 5: DGCA should also make available the list of study material for the students.

Adequacy of Question Bank

The Committee reviewed the adequacy of the question bank used by DGCA for conducting pilot examinations and suggested that an adequate question bank needs to be prepared. It was suggested that initially the question bank should have at least 1200 – 1500 questions, with due weightage to the subject which could subsequently be increased to approximately 2000 questions.

Based on the information provided by DGCA, the Committee concluded that the number of questions available with CEO needs to be enhanced.

Recommendation 6:

1.   The Committee recommends that the question bank needs to be enhanced.

2.   While framing questions, DGCA should ensure that they are strictly as per the laid down syllabus.

3.   DGCA should prepare a question bank containing large number of questions. An ideal ratio of 1:10 is suggested.

4.   The questions should be properly vetted to prevent subsequent objections from examinees.

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3.   LICENSING SYSTEM

The Committee was provided the detailed requirements and the process followed for the issue of various licenses.

A candidate desirous of obtaining a license is required to fulfill the following criteria which have been laid down in the Aircraft Rules, 1937 and detailed procedures have been specified in various Civil Aviation Requirements:

a) Age;
b) Educational Qualification;
c) Knowledge;
d) Experience; and
e) Medical requirements.

During the process of meeting the above requirements, a candidate is required to:

1. Pass examination conducted by CEO for demonstrating his knowledge
2. Apply to Directorate of Training and Licensing after all the above listed requirements have been completed

Examination conducted by CEO

CEO conducts examination which may include written and/ or oral examination depending on the type of license being acquired. The process of examination is conducted by CEO which utilizes a software application prepared by NIC. The application supports the L1 (pre-examination process) and L3 (post-examination process) and includes:

a) Pre-examination process involves manual submission of application, scrutiny of application by CEO for acceptance and allotment of computer nos. (In case of new candidates) and roll nos. (For candidates applying for an examination). CEO publishes its list of admitted candidates on the DGCA website for informing the candidates. Thereafter, the examination is conducted by CEO at various centers across the country. These written examinations are paper-based (OMR). The system involves carrying the question papers to the respective centers by officers of DGCA along with OMR sheets. These are brought back to CEO after the examination is completed.

b) Post-examination process involves computerized scanning of OMR sheets and declaration of result on DGCA's website. DGCA also has been issuing result cards to individual candidates. These have now been discontinued keeping in view the fake result cards being used for issue of licence by some of the candidates. Candidates have now been advised to download the relevant page of the result from the website for submission to DTL for issue of license.

In order to make authenticate result available to DTL, CEO provides a duly certified copy of the result. DTL is now required to verify the result provided by a candidate with the result provided by CEO before the result is accepted for issue of the license.

In this regard, the Committee feels that the manual system of providing the result to DTL has its constraints in terms of:

a) Extensive use of manpower to prepare and certify the result in CEO.
b) Laborious scrutiny of the result by DTL. This may result in time-consuming process of manually verifying the result and delayed issuance of license.

Recommendation 7: **In consideration of the above, the Committee recommends that the result processed in CEO is electronically merged with the DTL records.**

Processing of application in Directorate of Training and Licensing for issuance of license

DTL issues licenses for pilots based on the candidate completing all the requirements for the issue of a license. The license is generated electronically through the 'Licensing Application' which has provision for recording information in respect of age, basic qualification, experience and knowledge. The system was developed by NIC a decade back and is now very old and needs technical upgradation urgently. The present work load is too much for the system to handle. The current system has only the provision for issuance of licence and medical assessment. The renewal of licenses is still done manually at headquarters/ regional offices leading to inconsistency in database. The system is not linked with CEO database and therefore the result is to be manually entered in the DTL licensing system.

Age and basic qualification

One of the criteria for issue of license is age and basic qualification. In the case of issue of Commercial Pilot license, the candidate is required to be of 18 years with basic qualification of 10+2 with Physics and Mathematics. The result is verified at the time of

issue of license by writing to the relevant Boards. Delay in verification of this leads to delay in the issue of license.

> **Recommendation 8:** **In order to speed up the process, the Committee, considering that the examination by CEO is part of the license process recommends that such verification is initiated at the time of allotment of Computer No.**

Flying training and experience:

Flying training is imparted by flying training institutes approved by DGCA which meet the detailed requirements laid down in CARs. The Committee was informed that to ascertain that these institutes continue to meet the requirements, as a special drive these institutes are being subjected to audit by DGCA officials. Committee showing concern on the quality of candidates coming out from these institutes expressed a need to have an entry level examination at the time of admission of these candidates to flying institutes. The committee was informed that IGRUA, Rae Bareli and NFTI, Gondia conduct entry level examination which also includes aptitude test for the aspirants to the flying training programme.

> **Recommendation 9:** **The Committee considering that only such persons who have an aptitude for flying, come into the profession recommends that an entry level examination is taken prior to giving admission. Further the committee recommends that such examination should cover an aptitude and a** psychometric test**. These tests may be conducted by the proposed agency who would conduct the examination on behalf of DGCA in future (Recommendation 3) and till such an agency is setup/ identified, by IGRUA.**

Flying experience:

DTL presently depends on the log books of the candidates for ascertaining requisite flying experience of the applicant. The Committee was informed by DGCA that there have been cases of manipulation of flying records. In such cases, DGCA has to resort to verification of the records from the flying training institute.

Recommendation 10: The Committee considering the above limitations recommends that provision for acquiring/obtaining flying experience directly from the flying institutes is considered. Further, DGCA should explore the possibility of bringing the movements of training aircraft of various flying clubs online. Such monitoring of the aircraft of all the flying clubs will minimize manipulation of log books.

Recommendation 11: The Committee considered that the root cause of unfair means adopted by pilots was their repeated failures in the written examinations. The Committee felt that there is a need to create state-of-the-art training facilities in the country for pilots and aircraft maintenance engineers.

4.   DEVELOPMENT OF COMPREHENSIVE SYSTEM FOR LICENSING

The Committee examined in detail the current system of licensing, its associated procedures and processes. It was felt that the present system of licensing including examination which was partially computerized and mainly manual was not capable of handling the vast numbers of applicants efficiently. It was further felt that with the appropriate use of technology many of the processes could be simplified and human interface removed to avoid chances of tampering.

Recommendation 12: The Committee based on the above factors and after detailed deliberations recommends that a unified data base for licensing of personnel (pilots, AME and ATCOs) should be developed. The comprehensive licensing system should include:
a)   Minimum human interface;
b)   Interface with examination and medical;
c)   Interface with other agencies vis-à-vis flying training institutes and airlines for obtaining information pertaining to movement of aircraft, their maintenance, actual time flown and other related data directly.
d)   Use of digitized pilot log book. Introduction of bio-metric identification systems.
e)   Introduction of smart card license with a microchip, having all details of the license holders.

Committee was made aware of the proposal of eGovernance system (eGCA) of DGCA. The Committee considering that the above system cannot wait for the total eGCA system to

finalize and recommends that the 'Comprehensive Licensing System' is de-linked from the eGCA project. However, the system developed should have the option of integration with the eGCA system in future. A presentation in this regard was provided by NIC wherein a Comprehensive Licensing System was proposed (Appendix 'E').

The Committee considers that examination conducted by CEO is part of the licensing process and should have the responsibility to initiate some of the processes which are presently being undertaken by the Licensing directorate and Airworthiness Directorate. Processes involving verification of basic qualification should therefore be the responsibility of the CEO.

Constitution of the Expert Committee

No. A. 60015/044/2011 - DG
GOVERNMENT OF INDIA
MINISTRY OF CIVIL AVIATION
**

New Delhi dated the 25th of March, 2011

ORDER

As a follow – up to the statement made by the Hon'ble Minister for Overseas Indian Affairs and Civil Aviation on 15.03.2011 in the Rajya Sabha regarding issue of Pilot Licences, an Expert Committee comprising of the following has been set up:-

1. Shri E.K. Bharat Bhushan, Director General of Civil Aviation
2. Shri Vipin Sharma, Director Engineering and SBU Head, Air India
3. Capt. A.K. Govil, ED (Ops), Air India
4. Prof. Lajpat Rai, Head, Institute of Technology and Management (former IIT Delhi)
5. Capt. Rohinton Bhappu, Member, CASAC
6. Shri Mahesh Chandra, DDG, NIC
7. DG Inspection and Safety, Air Hqrs. Representative
8. Dr. Sanat Kaul, former Representative of India in ICAO
9. Shri Rohit Nandan, Joint Secretary, MoCA-   **Convener**

2.   The above Expert Committee will have following Terms of Reference:-

1)   To examine the current system of examination of pilots, engineers etc., and make recommendations to make examination system secure, credible and efficient and in line with modern and best practices;

2)   To examine introduction of electronic technology, online examination and make recommendations;

3)   To examine the current system of licensing, procedure and processes and make recommendations for improvement;

4)   To examine and make recommendations for introduction of effective system of cross-verification of documents of licensing filed by candidates;

5)   Any other task assigned by the Ministry.

...contd/-

3.   The Expert Committee will complete its task within 5 (five) weeks and make report to the Ministry.

4.   The Expert Committee may divide itself into two sub-groups – one will look into the examination system and the other will look into licensing and cross-verification. The EC project currently underway also include devising revision of licensing regulations and requirements of pilots/AMEs etc. in line with EU.

5.   The Committee can consult the EC experts on this subject.

(Ashok Kumar)
Under Secretary to the Government of India

To

All members of the Committee.

Internal Distribution:-

1.   PS to HMCA
2.   Sr. PPS to Secretary
3.   PS to JS(N)/PA to Dir(A)
4.   Office of DGCA
5.   Guard Folder

Minutes of the Meetings

1st MEETING OF THE EXPERT COMMITTEE ON PILOT ISSUES TO DISCUSS THE IMPROVEMENT IN THE EXAMINATION SYSTEM AND ISSUE OF PILOT LICENCES BY DGCA IN THE LIGHT OF RECENT DEVELOPMENT IN DGCA HELD ON 01.04.2011.

1st meeting of the Expert Committee constituted by the Ministry of Civil Aviation was held under the Chairmanship of Shri E.K. Bharat Bhushan, Director General Civil Aviation, to discuss the improvement in the examination system and issue of pilot licences by DGCA in the light of recent development in respect of pilot issues.

2.   Chairman welcomed the Members of the newly constituted Committee. He explained in brief the recent development which have taken place in DGCA in respect of pilot licence obtained by certain pilots by fraudulent means. Chairman stated that in pursuance of the statement given by Hon'ble Minister for Civil Aviation in Rajya Sabha on 15.02.2011, the Government has constituted the Expert Committee to device a mechanism to stop the misuse of the existing system of examination by DGCA and issue of pilot licence on the basis of the result of the examination.

3.   On the direction of Chairman, Shri A.K. Bhardwaj, Director, DGCA gave a presentation to the Members of the Expert Committee. The presentation contained detailed licencing procedure which included subjects of exam, types of licences issued and procedure for issue of various types of licences by DGCA.

4.   Chairman informed the Members that they are also exploring the possibility of bringing the movements of training aircraft of various flying clubs online on the pattern which is followed IGRUA, Rae Bareli and NFTI, Gondia. Chairman also informed the Members that in the controlled airports, there is a system of generation of records of the movement of aircraft. However, once the online monitoring of the aircraft of all the flying clubs are in position, the manipulation of log books will be minimized.

5.   On the issue of NIC's software presently used by Licensing Dte, DGCA, Shri A.K. Bhardwaj informed Chairman that the system was very old and needed upgradation urgently. He also informed that the present work load was too much for the present system to handle. In reply to this, the NIC representative informed the Chairman that there are different levels of users and all levels are not used. Only the mandatory part is being used. Dr. Mahesh Chandra, Dy. Director General, NIC requested Chairman that NIC can look into the issues only if DGCA gives their specific requirement in a documented form.

6.   Shri Pathak, Director, DGCA explained the procedure followed in the CEO for registration, verification of the documents, generation of computer number of the candidates etc. He informed the members that once a computer number is generated in

respect of candidates, this is a permenant number for him and all his records can be traced by clicking his registration number. JS(N) informed Chairman that there is a duplicacy of work in CEO and Directorate of Training & Licence (DTL). The verification of certificate are done twice, first time when a candidates submit his papers for appearing in the Examination and second time when he goes for issue of pilot licence. He advised that all verification work should be done at the entry level itself.

7.	Capt. Rohinton Bhappu informed Chairman that at present there is no cap on the number of attempts for appearing in the CPL exam. He also informed that in some countries, candidates, after two failed attempts go back to flying school for upgrading their skills. A similar system should also be followed by DGCA. He also advised Chairman that the currency of the passed papers should also have validity. To this, Chairman said that on validity issue a separate meeting of the Committee would be required.

8.	Shri A.K. Bhardwaj, Director, DGCA informed the Committee that earlier one was allowed to upgrade from PPL to CPL. Now, however, one can directly go for CPL. To this Capt. Govil of Air India informed the Committee that the syllabus of the subjects prescribed by DGCA was very broad and it is not possible for students to pass the exams. This results in lower percentage of passed candidates. Shri Pathak, Director DGCA informed that it was not correct. Normally the pass percentage vis-à-vis candidates were in range of 15 to 20 percent. However, this varied category to category. JS(N) advised that DGCA should publish the entire syllabus and the question bank on the website. Chairman asked DDG NIC to look into the possibility of doing so. Dr. Mahesh Chandra, DDG NIC informed Chairman that unless a clear documented requirement is given to the NIC, it is not possible for them to formulate any system for DGCA. He also informed Chairman that DGCA should always give NIC the changed requirement so that the existing system can be accordingly modified. He also informed that NIC is capable for developing a unified data base for ATPL, CPL. AME etc.

9.	Chairman told Shri Pathak that they should immediately submit a paper to NIC on this. He also specified that the confusion of number of papers may also be looked into. Only after the paper is submitted to NIC, it will be possible for them look into the possibility. DDG NIC informed Chairman that in case the paper is given to them in a weeks time, they would be able to make the system ready for a mock test in May, 2011. Chairman requested the DDG NIC to take up this matter on a turn key basis. JS(N) told Shri Pathak to expedite setting up of question bank urgently. Shri Pathak informed that they would meet one weeks time to finalise the syllabus.

10.	Shri Rohinton Bhappu informed Chairman that while preparing the question bank, DGCA can also look into the websites of EASA etc. where their question banks are already available. JS(N) requested DGCA officers to coordinate with NIC to resolve the matter quickly.

11.	 Capt. Govil of Air India advised Chairman that DGCA must evolve an SOP for CEO & DTL. He also advised that an interfacing is needed for generation of pilot licences in DGCA. Capt. Bhappu also advised that while considering the online system, medical centres also

need to be linked with the data interface. DDG NIC informed Chairman that they can evolve a single system where all critical information can be made available for the users.

12.   Capt. Bhappu also suggested that study material may also be made available for the students. He also suggested that the examination centres of DGCA need to be outsourced. Professor Lajpat Rai of IIT Delhi advised that the question bank should be large to get enough questions

13.   Concluding the meeting, Chairman informed the Committee members that DGCA is taking certain measures internally to take the malpractice being reported in the media. He tentatively fixed date for next meeting of the Committee on 12.04.2011. He directed DGCA officials that NIC must be given the required documents well before the meeting so that they can come to the meeting fully prepared.

14. Meeting ended with thanks to the Chair.

MEETING TAKEN BY JS(N) ON 05.04.2011 IN CONTINUATION OF THE 1ST MEETING OF THE EXPERT COMMITTEE ON PILOT ISSUE HELD ON 01.04.2011

In continuation of the 1st meeting of the Expert Committee held on 01.04.2011 under the Chairmanship of DGCA, JS(N) took a meeting on 05.04.2011 with Dr. Mahesh Chandra, DDG, NIC alongawith his team and officers from CEO and DTL of DGCA.

2.   Initiating the discussion, JS(N) reiterated the decisions taken in the last meeting of 01.04.2011 and stated that in order to restore the public confidence in the system. It is essential that a foolproof mechanism is evolved so that the malpractices presently reported by the media do not re-occur.

3.   Director, CEO gave a detailed explanation of the present system of four papers followed by them and also their migration to nine papers by end-2012. he promised that as decided in the earlier meeting, they will submit a paper on procedure, number of papers, an other details to NIC by 8th April, 2011.

4.   JS(N) suggested that human intervention in the system need to go. He also advised that the concept of Common Entrance Exam on the pattern of BITS Pilani, IIT-JEE, CAT etc. need to be explored. Involvement of IGRUA may also be explored. He directed Shri Pathak, Director CEO to give a complete folder of all the relevant papers giving provisions in the CARs, deviation to be highlighted, suggestions for improvement in any procedure etc. for circulation to all the members of the Expert Committee. He advised that existing rules, regulations and procedures may be given by Friday for communicating to the Members through e-mail. In addition 10 –12 CDs may be prepared for providing the information to members during the next meeting.

5.   DDG NIC informed JS(N) that they can develop the system whereby feeding of question bank topicwise was possible. He however, advised Director CEO that they must decide the topics, procedure etc. and give the documents immediately. He also informed that L-I and LIII are ready for four papers can definitely be used after integration of L-II with it. JS(N) advised that the papers to be submitted by DGCA to NIC must explain policy clearly. DGCA officers were of the opinion that initially the new system should only be applicable for ATPL. Later on this can be extended to CPL also.

6.   On the issue of lack of infrastructure of DGCA, JS(N) advised that they should explore the possibility of engaging out side agencies to conduct the exams.

7.   DDG NIC informed JS(N) that they will give a detailed presentation on the integration of system that interface with other agencies, flying club etc. He informed that flying club would be able to log on the system through web connection. Shri AK Bhardwaj, Director DGCA suggested that while interface is developed by NIC, engineering Department also need to be included in this. Similarly, for ATPL licences, airlines also need to be interfaced. JS(N) advised DDG NIC that they should give the specification of the hardware required by DGCA and also give a plan for training the staff to operate the system. He

advised that NIC should give a more comprehensive presentation on this issue in the next meeting of the Expert Committee.

8.   Meeting ended with thanks to the Chair.

2nd MEETING OF THE EXPERT COMMITTEE ON PILOT ISSUES HELD ON 18.04.2011 TO REVIW THE IMPROVEMENT IN THE EXAMINATION SYSTEM AND ISSUE OF PILOT LICENCES BY DGCA IN THE LIGHT OF RECENT DEVELOPMENT IN DGCA.

2nd meeting of the Expert Committee constituted by the Ministry of Civil Aviation was taken by Shri E.K. Bharat Bhushan, Director General Civil Aviation, to review the progress made since the last meeting held on 1st April, 2011 to discuss the issue of online examination system. A list of participants is annexed.

2. Initiating the discussion, Shri Rohit Nandan, JS(N) informed DGCA that subsequent to the 1st meeting of the Expert Committee, a separate meeting was taken by him with the NIC and DGCA officers on 5.04.2011 to firm up the issue of finalization of the syllabus, question bank etc. Dr. Mahesh Chandra, DDG, NIC assured in that meeting that NIC would prepare a presentation for the next meting of the Expert Committee.

3. JS(N) informed the Committee that a private firm M/s APTECH, a computer firm had given a Presentation on the online system. He also informed the Committee that the firm has about 40 places where their infrastructure is available with 30 to 40 computers at each place. He also informed that the firm is already handling the online examination cases of various organizations, including UPSC for which they had conducted online examination of CBI inspectors. The Committee opined that possibilities may be explored to find out the mechanism adopted by UPSC to engage the firm for hiring their infrastructure so that once the online examination in place, it will be easy for candidate to spread out to different locations to appear for the examination.

4. DDG, NIC informed the Committee that from their side the system was ready except the question bank. On this, Shri Pathak, Director, CEO informed the Committee that a list of 15 points pertaining to question bank has been given to NIC and once this is accepted by NIC, these would be loaded on the system.

5. DGCA suggested the Committee that till such time, the preparation of new question bank is ready for loading on the system, CEO may provide the old questions to NIC so that these can be tested by them before the actual online system is commenced.

6. It was also unanimous opinion of the Committee that they can start with the ATPL exam online and subsequently can be extended to CPL also. DDG NIC suggested that CEO may put chapter number on each subject to facilitate their feeding. Shri Lajpat Rai advised that degree of difficulty must be spelt out clearly.

7. After the above discussion, NIC gave a detailed presentation which included various fields for feeding the data. The presentation also included the online monitoring of the details of flying clubs, airlines etc. pertaining to movement of aircraft, their maintenance, actual time flown and other related data. DDG NIC informed the Committee that the

movement a candidate registers himself, unique ID will be generated automatically which will be permanent number. Shri Sanat Kaul suggested that digitalization of educational certificate of the candidate is a must.

8.   It was also the opinion of the Committee that a help desk with a dedicated line would be useful for the candidates to get the information regarding the new exam system. DGCA informed the Committee that in internal committee would be constituted in DGCA to look into the presentation of the NIC in detail. He also informed that Shri AK Bhardwaj, Director, DGCA will be the nodal officer for getting the inputs from flying clubs and Mrs. R. Savitri, Director (Statistics) DGCA will be nodal point for computer related matters.

9.   DGCA asked NIC to fix a timeline for the implementation of the system and ensure that the coming July, 2011 session of ATPL exam is conducted online. Initially, they may go ahead with 4 papers containing all 8 modules and subsequently can migrate to 8 papers system. DGCA informed DDG NIC that CEO has 800 old questions ready on their system and can be made available to them for testing purposes. After the acceptance of the question bank software by CEO, feeding of the questions will began by CEO chapter-wise immediately. Shri Pathak assured that July, 2011 session of ATPL would be online.

10.   DDG NIC requested DGCA that the link between NIC, CGO complex and CEO office in R.K. Puram needs to be upgraded. He advised that Ministry can go for MTNL lease line for the purpose.

11.   It was decided that next meeting of the Committee would be held some time around 2nd week of May, 2011. The meeting ended with thanks to the Chair.

MINUTES OF THE THIRD MEETING OF EXPERT COMMITTEE ON PILOT LICENCING HELD ON 16TH MAY,2011

The third meeting of expert committee was convened on 16th May, 2011 in the Ministry of Civil Aviation. The Chairman apprised the committee of the internal meeting in DGCA taken by him on introduction of online examination system for pilots and engineers. The committee was informed that the syllabus has been finalized and will soon be placed on DGCA's website. A team of DGCA officers has been formed to authenticate the questions before uploading the question bank on to the new system in modular format. The question bank will be fed into the NIC system after checking. He also informed the committee that in all probability, the ATPL examination from July onwards would be conducted online. Before that certain issues need to be sorted out such as availability of terminals, premises, equipment and personnel. The committee was also informed that UPSC had outsourced the online examination conducted for CBI to the company ATEST, a subsidiary of Aptech Ltd., and DGCA was examining the possibility of hiring similar services after following the due procedure.

2.   JS(N) drew the attention of the committee to the core issue before it, i.e. licensing – which comes after examination is over - and sought the views of NIC on the progress made on development of comprehensive system for licencing. DDG(NIC) informed the committee that NIC was working on the system software and would be submitting a proposal to DGCA soon.

3.   JS(N) suggested that the pilot log book should also be digitalized. DDG(NIC) further informed that the L-1 software will be released to DGCA today and the L-2 on 18th May, 2011 for a dry run with existing 800 questions.

4.   Dir(CEO), DGCA informed the committee that they have started testing the question bank and those questions which have been tested can be uploaded once the software is released by NIC and the system demonstrated. DDG(NIC) stated that NIC would required some details regarding connotation of chapters, question no. and difficulty level. DGCA fixed a target date 31 May, 2011 for completing all requirements.

5.   A presentation was made by representatives of ATEST on their system of conducting examinations. After the presentation the representative of ATEST left the meeting.

6.   DGCA sought the committee's view on the possibility of amalgamation of NIC and ATEST system or similar system available. DDG(NIC) was of the view that the ministry needs to take decision in this regard. He however suggested that the system would need to be sanitized before conduct of examination and ministry could consider introduction of bio-metric identification systems.

7.   It was also observed during the presentation made by ATEST that they would be ready to launch at a notice of 15 days and the cost per candidate would be approximately Rs. 310. The committee also noted that presently DGCA was charging a fee of Rs.500 per candidate. The committee was of the view that the system could be outsourced on end-to-

end basis, to an agency shortlisted after following the due procedure. DGCA suggested that a small committee be formed in DGCA to look into that aspect. In the meanwhile, DG will talk to Secretary, UPSC also on this issue.

8.   JS(N) desired to know from Dir (CEO) about the procedure followed in DGCA for verification of examination results.   Dir(CEO) informed that earlier, the details of candidates were made available to the Directorate of Training and Licencing on demand. But now all registers are being sent to DTL. It was observed that this is a primitive practice and a system needs to be developed which is convenient to all users and is tamper proof, with minimum human intervention. It was suggested that each candidate should be given a unique ID, for example the computer number generated and accordingly all his details should be fed into the system which can be accessed using that ID. Chairman sought the views of NIC on whether this could be covered under the proposed comprehensive system.

9.   DDG(NIC) clarified that the system proposed by NIC provides for the same and explained the system to the committee by way of a presentation. The presentation also provided details about the proposed smart card licence with a microchip, having all details of the licence holders. All privileges available to the pilots can be punched on to this smart card.

10.   After the presentation the Chairman desired to know whether this system can be integrated with the eGCA (eGovernance system of DGCA). The committee was informed that eGCA would take some time to materialize and therefore, the system should be developed separately, with option to integrate it with eGCA when it becomes operational. Chairman directed DDG(NIC) to have a look at the present systems in DGCA and suggest the best possible online interface system between DTL and CEO.

11.   DDG (NIC) suggested that NIC would prepare a project report and roadmap for the interface, which would be aimed at removing all human interface and submit the same to DGCA. After the report is accepted by DGCA and other required processes completed, NIC would require 5 months to develop the system. Chairman directed that a meeting be convened on this issue with NIC.

12.   After detailed deliberation on the best possible option for early transition to online examination, the committee was of the view that while the L-1 system developed by NIC should be continued, for the L-2 phase, DGCA could consider outsourcing this part to some suitable agency selected after due process.

13.   In conclusion, JS(N) informed the committee that the time allotted to them for submitting the report was nearing and issues of interface between systems and AME licencing still remain to be discussed. It was decided that extension beyond five weeks be sought for the committee.

        The meeting ended with a vote of thanks to the Chair.

List of rules and regulations including laid procedures followed for the licensing and examination of personnel provided to the Committee Members

1. Aircraft Rules, 1937

   a. Part V - Personnel Of Aircraft (Rules 38 To 43) – Provisions For Licensing Of Pilots Including Their Medical

   b. Rule 61 – licensing of engineers

   c. Rule 61A – validation of licenses of engineers

   d. Schedule II – Detailed provisions for licensing of pilots…

2. Civil Aviation Requirements

   a. CAR Section 7 Series 'B' Part I - Eligibility Criteria For Written Examinations For Issue/ Extension Of Flight Crew Licenses/Ratings

   b. CAR Section 7 Series 'B' Part II - Syllabus for Oral Examination for issuance of Student Pilot's Licence for Aeroplanes, Microlight Aircraft, Gliders and Balloons

   c. CAR Section 7 Series 'B' Part III- Syllabus for Examination for Issue of Private Pilot's Licence for Aeroplanes and Pilot's Licence for Microlight Aircraft, Gliders and Balloons.

   d. CAR Section 7 Series 'B' Part IV - Syllabus for Examination for Issue of Commercial Pilot's Licence and Instrument Rating, Aeroplanes and Helicopters.

   e. CAR Section 7 Series 'B' Part VI - Syllabus for Examination for Issue of Airline Transport Pilot's Licence for Aeroplanes

   f. CAR Section 7 Series 'B' Part VII - Flying Training syllabus for grant of Pilots licences and ratings.

g. CAR Section 7 Series 'B' Part VIII - Syllabus for Examination for Issue of Student/ Flight Navigators Licence

h. CAR Section 7 Series 'B' Part IX - Training Syllabus for issue of Helicopter Pilot Licences

i. CAR Section 7 Series 'B' Part X - Syllabus for Extension of Aircraft rating (Helicopters)

j. CAR Section 7 Series 'C' Part I - Medical Requirements and Examination for Flight Crew Licences

k. CAR Section 7 Series 'D' Part I - Approval of Flying Training Institutes

l. CAR Section 7 Series 'D' Part II - Guidelines For Safety Oversight And Surveillance Of Flying Training Institutes

m. CAR Section 7 Series 'D' Part III - Requirements for approval of Type Rating Training Organization (TRTO)

n. CAR Section 7 Series 'G' Part I - Requirements for Issue of Indian Licences and Aircraft Ratings to Pilots holding licences and aircraft ratings issued by Contracting States

o. CAR Section 7 Series 'G' Part II - Validation of foreign licences of Flight Crew

p. CAR Section 7 Series 'G' Part III - English for Aviation Language - Training, Assessment, Test and Certification

q. CAR Section 7 Series 'G' Part IV - Grant of commercial pilot license to Defence Personnel.

r. CAR Section 7 Series 'H' Part I - Procedures for renewal of expired professional pilot's licences

s. CAR Section 7 Series 'I' Part V - Criteria for approval of Chief Flying Instructor and Flight Instructor Incharge for Flying Training.

t. CAR Section 7 Series 'I' Part VI - Age of Flight Instructors in Approved Flying schools for issue of SPL, PPL & CPL.

u. CAR Section 7 Series 'I' Part VII - Criteria for approval of Ground Instructors

3. Airworthiness Procedures Manual

a. Chapter 12 - Conduct of Examinations by field offices; and

b. Chapter 13 - Conduct of Examinations by Central Examination Organization (CEO)

4. Procedure & Training Manual for Training and Licensing Directorate – The Manual contains the procedure adopted for issue, renewal, conversion, validation of flight crew licenses and endorsement of aircraft type rating, open rating etc. on the flight crew licenses.

5. Draft Syllabus

a. Draft Pilot Syllabus

b. Draft Syllabus for engineers - CAR 66

Initiatives taken by DGCA to improve the licensing and examination system

1. Licensing process has been streamlined. Under the system, before the issuance of licence, process of verification of the examination results from the examination wing (CEO) of DGCA has commenced.

2. DGCA is actively pursuing to commence online examination. It is proposed to hold online ATPL examination in July 2011 session.

3. To make examination and licensing system secure move to introduce electronic technology.

4. Syllabus for pilots in line with international standards has been finalized.

5. Before foreign pilot licences are converted to Indian licences, the authenticity of foreign licences are ensured. These pilots are subjected to Competency check before the issue of the licence.

6. A special drive to conduct one-time audit of all Flying training institutes is underway to ensure that the institutes meet the requirements.

Proposed Comprehensive Licensing System proposed by NIC

Civil Aircraft Register

Registration details

Online applications

Education Boards

Medical Authorities

Flying Clubs/Schools, AME Schools, Airlines

Central Examination Organisation, DGCA

Centralised Database

DGCA/MoCA

Dte Training and Lic

Dte of Airworthiness

Candidates

ICAO, Airlines, ICAO contracted states

MEA, IB, Narcotics etc in case of FATA