

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Groundcrew Examining Board (GEB)
Air Force Station
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List of documents submitted in support of the Qualifications File

1. Curriculum and training contents for Joint Basic Physical Training (JBPT) (Annexure-I)
2. Curriculum and training contents for Trade Phase Training Term –I (Annexure -II)
3. Curriculum and training contents for Trade Phase Training Term – II (Annexure -III)
4. Curriculum and training contents for Trade Phase Training Term – III(Annexure -IV)
5. Curriculum and training contents for Trade Phase Training Term – IV(Annexure -V)
6. Air Force Order (AFO) 57/15 specifying the role of Ops Asst (ATS) (Annexure -VI)
7. Blue Print (Annexure -VII)

SUMMARY

1. Qualification Title	AC/LAC : Operations Assistant
2. Qualification Code	IAF/AFSO/030
3. NCO Code and Occupation	3521.1600, Control Tower Operator
4. Nature and purpose of the qualification	A Trade Certification to equip the airwarrior with adequate knowledge and skill to perform the duties in the Air Traffic Control Section of Air Force Units / Station.
5. Body/bodies which will award the qualification	Electronic Training Institute (ETI)
6. Body which will accredit providers to offer courses leading to the qualification	Directorate of Training (D Trg), Air HQ& Regional Examining Board (Training) {REB(T)}
7. Whether accreditation/affiliation norms are already in place or not (if yes, attach a copy)	N/A as specific to Defence Forces
8. Occupation(s) to which the qualification gives access	AC/LAC of Ops Asst
9. Job Description of the Occupation	He has to maintain a continuous watch on all visible flight operations, operation of arrester barrier, duty air traffic clerk. Details given at Annexure- VI
10. Licensing requirements	N/A
11. Statutory and regulatory requirements of the relevant sector (documentary evidence to be provided)	Air Force Act, Air Force Regulations, Air Force Order,
12. Level of the qualification in the NSQF	Level 4
13. Anticipated	3690 hrs of training comprises of:-

<p>volume of training/learning required to complete the qualification</p>	<p>(i) 1050 hrs of JBPT training. (ii) 2640 hrs of trade training comprises of:- (i) Term –I : 660 Hr (ii) Term –II : 660 Hr (iii) Term –III : 660 Hr (iv) Term- IV : 660 Hrs</p>
<p>14. Indicative list of training tools required to deliver this qualification</p>	<p>Classroom with modern AV aids, Air Field Specialist Vehicles Operation, Error Management Software, Communication System, Computing appliances, Fire Arms, Range, Ground Training Infrastructure.</p>
<p>15.Entry requirements and/or recommendations</p>	<p>Education Qualification: Passed Intermediate / 10+2 / equivalent examination in any stream / subjects approved by Central / State Education Boards with minimum 50% marks in aggregate and 50% marks in English. OR Passed two year vocational course affiliated / recognized by CBSE / State Education Boards/ Councils duly recognized at par with 10+2 by AIU with minimum 50% marks in aggregate, and 50% marks in English in Vocational Course or in Intermediate / Matriculation if English is not a subject in Vocational Course. Age : 17 Yrs -21 Yrs Prerequisite for TPT: Airwarrior should have successfully completed Joint Basic Phase Training</p>
<p>16.Progression from the qualification</p>	<p>Job Progression AC→LAC→Cpl*→Sgt*→JWO*→WO→MWO *Subject to clearing promotion exam for Corporal (Cpl), Sergeant (Sgt) and Junior Warrant Officer (JWO) called as Corporal Promotion Exam (CPE), Sergeant Promotion Exam (SPE) and JWO Promotion Exam (JPE)</p>
<p>17.Planned arrangements for the Recognition of Prior learning (RPL)</p>	<p>N/A</p>
<p>18.International comparability where known</p>	<p>Not known</p>
<p>19.Date of planned review of the qualification.</p>	<p>Every 5 yrs or earlier in case of change in training syllabus pattern.</p>
<p>20. Formal structure of the qualification</p>	

Title of component and identification code.	Mandatory / Optional	Estimated size (learning hours)	Level
<p>1. (a) Knowledge on all visible flight operations on and in the vicinity of the aerodrome including aircraft, vehicles and personnel on manoeuvring area and assist in control of such traffic by standard light and pyrotechnic signals.</p> <p>(b) Display ground control signals as and when required.</p> <p>(c) Keep a listening out watch of the exchange of communication between Air Traffic Control and aircraft and maintain an up-to-date record of all landings and take offs in his watch log.</p> <p>(d) Check up from IAFF (AO) 1201 and other clearances received from the Captain of an aircraft, record the particulars in his log book and the appropriate boards provided and obtains clearance for the aircraft from the Air Traffic Control Centre concerned and the aerodrome of destination.</p> <p>(e) Prepares and dispatches Air Traffic Control Messages in respect of the movements of out bound aircraft and receives, action files these in respect of the movement of inbound aircraft.</p> <p>(f) Obtains and display aeronautical information in respect of all other aerodromes and notifies the same to appropriate units in respect of parent aerodrome.</p> <p>(g) Takes appropriate action as defined in local orders on receipt of met warnings.</p> <p>(h) Prepares landing and housing charges in respect of civil aircraft and keeps an appropriate record of such bills.</p> <p>(j) Attend to all telephone calls and answers queries in respect of movement of aircraft.</p> <p>IAF/AFSO/030/01</p>	M	470	4
<p>2. Knowledge about the following:-</p> <p>(a) Manning of the crash tender.</p> <p>(b) Operation and daily inspection of the</p>	M	480	4

crash tender /fire pump. (c) Fire fighting operations IAF/AFSO/030/02			
3. Knowledge about the following:- (a) Lay out of visual landing aids during night/poor visibility conditions. (b) Night flying equipment. (c) Layout of flare path. IAF/AFSO/030/03	M	600	4
4. Knowledge about arrester barrier operation. IAF/AFSO/030/04	M	580	4
5. Knowledge about following related to Watch in Control Tower: (a)Emergency action. (b) Usage of available radio/ radar aids used to assist an aircraft in homing, holding and landing. IAF/AFSO/030/05	M	520	4
6. Awareness about duty of air traffic clerk IAF/AFSO/030/06	M	520	4
7. Awareness about the role to be performed as a member of flare path party layout emergency flare path and inspection of permanent lighting installations including obstruction lights. IAF/AFSO/030/07	M	520	4
TOTAL		3690	

SECTION 1 **ASSESSMENT**

21. Body/Bodies which will carry out assessment:

There are two bodies, which carry out the assessment:-

- (a) Unit Examining Board (UEB) of ETI is responsible for conducting in term exams.
- (b) Regional Exam Board (Training) [REB (T)] is responsible for conducting the End Term Exam for gauging the knowledge acquired by the airwarriors.

22. How will RPL assessment be managed and who will carry it out?

N/A as it is a step by step process, which progresses only if the Airman has successfully completed the earlier training stage.

23. Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.

Assessment is carried out by both UEB and independent REB (T). Both the Boards have all necessary infrastructure and pool of qualified Instructors, Examiners and Assessors to carry out detailed assessments. REB (T) uses all the modern trends like Online Testing and Evaluation System (OTES) for conducting the exams, evaluation and in depth analysis of the result. The exams are conducted in the following manner :-

(a) Written Exams are conducted by both Boards for the theory part of curriculum consisting of questions divided into three categories (i.e. factual, comprehension, application) for testing the knowledge of Airwarrior in his trade:-

- (i) Objective: MCQ, T&F, Fill in the blanks
- (ii) Subjective :VSA, SA, LA

(b) Practical Exam to test the:-

- (i) Professional Skill
- (ii) Core Skill of the Airwarrior

(c) Viva-Voce to gauge the overall knowledge, and its application in resolving an issue.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the the qualification” in the Summary.

NOTE:this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment Evidences

Title of Component:-

Outcomes to be assessed	Assessment criteria for the outcome
<p>1. Knowledge on all visible flight operations on and in the vicinity of the aerodrome including aircraft, vehicles and personnel on manoeuvring area and assist in control of such traffic by standard light and pyrotechnic signals.</p>	<p>1. Ability of Airwarrior in handling:-</p> <p>(a)</p> <p>(i) Objective and functions of the Air Traffic Control Services, rules of the air, visual flight rules and instrument flight rules. Receipt /despatch of mail</p> <p>(ii) Regulation for local control of Air traffic, action in the event of accident and air crashes, control of MT vehicles and personnel within the aerodrome boundary ,breaches of traffic discipline. Opening of Files</p> <p>(iii) Air ground, light & pyrotechnic signals, traffic signals to vehicles. Maintenance of registers</p> <p>(iv) Firing of Vary pistol, usage of different colours of signal cartridges, GFI, PFF and smoke generator and life period of signal cartridges.</p> <p>(v) Co-ordination with runway controller.(vi)Cloud type and amount; wind direction & speed; visibility, atmospheric pressure, QFE,QFF,QNH and METAR report, SPECIAL and SPECI reports.(vii)Direction on earth, variation and deviation on course, track and drift. Units of measuring distances, methods of reporting positions, definitions of ground position, air position and Dead reckoning position.</p>

<p>(b) Display ground control signals as and when required.</p> <p>(c) Keep a listening out watch of the exchange of communication between Air Traffic Control and aircraft and maintain an up-to-date record of all landings and take offs in his watch log.</p> <p>(d) Check up from IAFF (AO) 1201 and other clearances received from the Captain of an aircraft, record the particulars in his log book and the appropriate boards provided and obtains clearance for the aircraft from the Air Traffic Control Centre concerned and the aerodrome of destination.</p> <p>(e) Prepares and dispatches Air Traffic Control Messages in respect of the movements of out bound aircraft and receives, action files these in respect of the movement of inbound aircraft.</p> <p>(f) Obtains and display aeronautical information in respect of all other aerodromes and notifies the same to appropriate units in respect of parent aerodrome.</p> <p>(g) Takes appropriate action as defined in local orders on receipt of met warnings.</p> <p>(h) Prepares landing and</p>	<p>(b) Knowledge of ground control signal, flag signals and recall signals.</p> <p>(c) Elementary knowledge of radio telephone communication procedure, phonetic alphabet, R/T procedure, words and phrases, maintaining Aircraft movement log book.</p> <p>(d)</p> <p>(i) Flight procedure for flights under aerodrome control, approach control and for flight information region.</p> <p>(ii) Definition of cruising level, Semi-circular systems of cruising level, Speed, airspeed, ground speed & true airspeed.</p> <p>(iii) Knowledge of radio navigational aids installed at the aerodrome and its corresponding equipment onboard aircraft.</p> <p>(iv) Maps and charts, Map reading.</p> <p>(v) Liaison with Met, Navigation and communication sections.</p> <p>(vi) Co-ordination with parent Air Traffic Control Centre.</p> <p>(e) Types and elements of Air Traffic Control messages, their origination, compilation and distribution.</p> <p>(f) Aeronautical information and the sources of its collection, NOTAM code, origination, compilation and distribution of NOTAMs and briefing messages, FLIP.</p> <p>(g) Meteorological reports, forecasts & forecast warnings.</p> <p>(h) AFI 01/95 and latest rates of landing</p>
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<p>housing charges in respect of civil aircraft and keeps an appropriate record of such bills.</p> <p>(j) Attend to all telephone calls and answers queries in respect of movement of aircraft.</p> <p>2. Knowledge about the following:-</p> <p>(a) Manning of the crash tender. (b) Operation and daily inspection of the crash tender /fire pump. (c) Fire fighting operations</p>	<p>housing charges for domestic and international civil aircraft.</p> <p>(j) Telephone communication procedures and proficiency in handling land line while adhering to directions issued on 'Security of communication' issued from time to time.</p> <p>2. Ability of airwarrior in handling :-</p> <p>(a) Various methods of extinguishing fire. (b) General causes of outbreak of fire in aircraft classification of aircraft crashes. (c) Crash Fire Tender drill, crew position, action on fire alarm, action by each member of crew during approach to crash, positioning of the crash tender and actual operation of the CFT at site of the crash. (d) Aerodrome crash fire tender and its foam producing and other ancillary equipment; foam, water pump and primer, controls and instrument, operation of the foam unit, valve setting , controls and instrument, maintenance and operation of Dry Chemical Powder Extinguisher, storing of foam hose. (e) Control & extinguishing of fire ,rules of combating aircraft fires, use of protective clothing and the fire equipment fitted on a crash fire tender. (f) The usual and emergency means of entrance to and exit from aircraft and easiest break in points, and rescue of occupants Making ejection seat safe ,operation of canopy, main battery.</p>
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<p>3. Knowledge about the following:- (a) Lay out of visual landing aids during night/poor visibility conditions. (b) Night flying equipment. (c) Layout of flare path.</p>	<p>3. Ability of airwarrior in handling: (a) Operation of Aerodrome Beacon. (b) Approved scale of portable lighting equipment and its upkeep, testing and changing of batteries of light markers. (c) Aerodrome layout, runway strips, approaches. (d) Standard and emergency flare path layout, lighting of aerodrome obstructions.</p>
<p>4. Knowledge about arrester barrier operation.</p>	<p>4. Ability of airwarrior to have basic knowledge of arrester barrier operations.</p>
<p>5. Knowledge about following related to Watch in Control Tower:- (a) Emergency action. (b) Usage of available radio/ radar aids used to assist an aircraft in homing, holding and landing.</p>	<p>5. Ability of airwarrior in handling:- (a) Roles, performance and limitation of IAF aircraft and elements of aircraft recognition. (b) Principle of dead reckoning navigation and the use of navigation computer. (c) Categories of the state of emergency and emergency procedure; action in the event of communication failure and other technical defects being experienced in the air/ground. (d) Overdue action and diversion of aircraft. (e) General characteristics, communication ranges and uses and limitation of various radio /radar aids and associated air-borne equipment.</p>
<p>6. Awareness about duty of air traffic clerk,</p>	<p>6. Ability to assist SAS&IO in Search and Rescue services.</p>
<p>7. Awareness about the role to be performed as a member of flare path party layout emergency flare path and inspection of permanent lighting installations including obstruction lights.</p>	<p>7. Layout of emergency flare path and operation of DRCD.</p>
<p>Means of assessment 1</p> <p>There are two types of Assessments viz. Formative and Summative. (a) The Formative Assessment is carried out continuously during the conduct</p>	

of course exam and is conducted by UEB.

- (b) Summative Assessment is carried out at the end of the course and the exam is conducted by REB (T).

Details are mentioned under means of Assessment-2. Written test, Practical examination/ Skill test and Viva-Voce.

Means of assessment 2

1. Means of Formative Assessment (Total marks allotted- 250) conducted by UEB

- | | |
|--|-------------|
| (a) Written test for Theory component | - 100 Marks |
| (b) Practical Test | - 100 Marks |
| (c) Viva voce for Practical Component. | - 50 Marks |

2. Means of Summative Assessment (Total marks allotted- 250) conducted by REB (T)

- | | |
|--|-------------|
| (a) Written test for Theory component | - 100 Marks |
| (b) Practical Test | -100 Marks |
| (c) Viva-Voce for Practical Component. | - 50 Marks |

Pass/Fail

The minimum qualifying standard is 50% marks in each part and 50% in aggregate of all parts of Course End Knowledge Test (CEKT) Exam conducted by REB (T). Those who score 70% in each apart are directly conferred the rank of LAC.

Should pass within 2 attempts

SECTION 2
EVIDENCE OF LEVEL

OPTION - A

Title/Name of qualification/component: AC/LAC of Operations Assistant			
Level: 4			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Airwarrior carries out routine jobs pertaining to Air Traffic Control Section.	Air warrior is able to identify the issues pertaining to Air Traffic Control , recognise the cause and able to resolve them of their own.	4
Professional knowledge	Airwarrior to possess fair knowledge of the organisation as Ops Asst(ATS) trade and their working culture. Be aware about the personal aspect in respect of, information, and personnel. Have basic working knowledge of various office equipments, computers, maintaining of office, despatch of mail in addition to the various trade duties of Ops Asst (ATS) mention above.	Airwarrior is able to acquire the working knowledge of the Air Traffic Control Section which include Air Traffic Services, Aircraft Rescue and Crash Fire Fighting Procedure, Aircraft Operation and Regulation, ATS Section Administration Met, Communication and Air Navigation which enable them to acquire the skills related to the duties Ops Asst (ATS) trade like FCC Clerk., Crash crew, Flare path crew, Arrester barrier crew, Airmen on Look Out, AOW,IC/Night Flying Store/Flare path, runway controller, IC Airfield works IC Section.	4
Professional skill	Able to grasp the problem, understand the consequences and take appropriate action to solve it.	Ability to recognise the cause of problem and understand the consequences it can likely lead to initiate corrective measures after consultation with the seniors.	4
Core skill	Able to communicate well with all personnel of the Unit/Station. Able to read the instructions, policies and orders in Hindi, English language.	Depict good communication skills, have a fair good computer knowledge, has good understanding of social and natural environment.	4

Title/Name of qualification/component: AC/LAC of Operations Assistant Level: 4			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	Handle computer and office equipments.		
Responsibility	Able to carry out the Air Traffic Control Section duties with ease.	At critical times requires supervision, otherwise able to handle section duties with fair amount of ease.	4

NSQC Approved

SECTION 3

EVIDENCE OF NEED

26. What evidence is there that the qualification is needed?

In current changing environment around the world, defence forces also need to accomplish the assigned task with utmost perfectness and within shortest time period, for that Organisation needs competent and well trained and highly skilled manpower. These Airwarriors, should be able to sense the onset of the problem and take corrective actions to solve the raised problems. Thus, after the JBPT, the TPT course gives to recruits in depth knowledge to handle various situations, which are likely to be encountered in the office during the course of actual field deployment both during war/ peace.

What is the estimated uptake of this qualification and what is the basis of this estimate?

It is totally based on the cadre, and actual figures cannot be revealed.

27. Recommendation from concerned Line Ministry of Govt/Regulatory Body. To be supported by documentary Evidences

The trade has been cleared by MoD and notification to the same effect is confidential in nature.

28. What steps were taken to ensure that the qualification(s) does / (do) not duplicate already existing or planned qualifications in the NSQF?

This qualification is especially tailor made to suit the specific Air Force requirements. In some parts it does have some similarity with civilian office working culture setup for which the NOS have been equated.

29. What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

IAF has a well defined Directorates responsible for monitoring both the training and testing aspects. **Directorate of Training** is responsible for ensuring that right training is imparted to the recruits. The syllabus is based on various studies and feedback received from field units/ REB (T).

Directorate of Education is responsible for Trade Testing and evaluation of the knowledge and skill level of the Airwarriors passing out from the training institute and their performance in field units.

This qualification will be reviewed and revised at an interval of five years or earlier, in case of change in syllabus based on the feedback from field Units/REB (T/Z).

SECTION 4
EVIDENCE OF PROGRESSION

30. What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

On completion of the course, an Aircraftsman will be posted to the field unit, where he will undergo OJT. On successful completion of the Air Traffic Control section training, as per his suitability he will be recommended to work any appropriate post in ATS sections. Accordingly, the airwarrior will be imparted with another five months of skill training under supervision and will be promoted to LAC. After three months of skill refinement he will be in a position to appear for CPE. On successful completion of CPE he will be promoted to Cpl after five years from date of enrolment. He will further keep climbing the promotion ladder by appearing for SPE for Sgt and JPE for JWO ranks. As per new policy in vogue, Appraisal Reports (AR) have been linked to skill levels. So, he will be motivated to enhance his skill levels and get them tested by appearing for Skill Gradation Test (SGT).

The progression flow is given below.

AC → LAC → Cpl* → Sgt* → JWO* → WO → MWO

*Subject to clearing promotion exam for Cpl, Sgt and JWO called as CPE, SPE and JPE

31. INSTRUCTOR PREREQUISITES: For posting as an instructor following prerequisites are to be fulfilled:-

(a) **Personal attributes:-**

- (i) Should be energetic, motivating, innovative and good at communication.
- (ii) Should be able to establish rapport with the trainees and employ innovative methods to impart instructions.

(b) **Qualification:-**

- (i) Should have attained rank of Sgt and above (at least 13 yrs of service).
- (ii) Should have been assessed 'Superior' and above during preceding 5 yrs.

(c) **QRs:-**

- (i) Should have in depth knowledge and be highly skilled in his trade.
- (ii) Should be recommended for instructional duties by GEB/REB on attaining stipulated standards during assessment.
- (iii) Should have undergone Methods of Instruction Course conducted by Ground Training Instructors School.

JBPTCJBPT SYLLABUS CALCULATION OF PERIODS

1. Duration of training	- 24 weeks
2. No. of working days per week	- 06 Days
3. No. of periods per week (10 x 6) (Each period of 45 minutes duration)	- 60 Periods
4. No of periods per day	- 10 Periods
5. No of periods (DWH) - 24 X 60	= 1440 Periods
6. <u>Course plan</u>	
(a) General Activities	- 100 Periods
(b) Public Holidays (08 days)	- 80 Periods
(c) 06 Second Saturdays (06 days)	- 60 Periods
(d) Effective training - (1440 – 240)	= 1200 Periods
7. <u>Allocation of Training periods</u>	
(a) During Working Hours (DWH)	
(i) GST & FCTC	- 590 Periods
(ii) English	- 350 Periods
(iii) GSK	- 165 Periods
(iv) Basic Computer Training	- 50 Periods
(v) Mentoring and Counselling	- 45 Periods
TOTAL	= 1200 Periods
(b) Beyond Working Hours (BWH)	
(i) Hindi Training	- 36 Periods
(ii) Weak Trainees / Night Classes	- 64 Periods
(iii) General Service Duties & Stn Duties	- 100 Periods
TOTAL	= 200 Periods
GRAND TOTAL (a) + (b)	= 1400 Periods

SI No	Syllabus Index	Subject	Total Periods
TRAINING ACTIVITIES DURING WORKING HOURS: SIX DAYS PER WEEK EXCEPT SECOND SATURDAYS			
1.	JBPTC/General/ 1 to 18	Arrival, Documentation, Clothing Issue, Diagnostic Test, Trade Allocation Test, Filling of TPRC and Bio-data, Lecture on Stress Fracture and Healthy Living, Lecture by Civil Psychologist, PAN Card Application and Bank Account Opening, Issue of Stationery, Lecture on Medical and Hygiene, Inoculation, Lectures on Aerospace Safety, Reporting of Unusual Occurrence, Handling of Communication Equipment, Intelligence & Counter Intelligence, Clearance, Latest Security Environment & Case Studies of modus operandi adopted by ANEs, Lecture on Cyber Security.	100
2.	JBPTC/GST/1 to 12	General Service Training (including Field Craft Training Camp)	590
3.	JBPTC/Eng/1 to 4	English	350
4.	JBPTC/GSK/1 to 11	General Service Knowledge	165
5.	JBPTC/Comp/1 to 8	Basic Computer Training	50
6.	JBPTC/MAC/ 1 to 07	Mentoring & Counselling	45
7.	-	Public Holidays	80
TOTAL (SL NO 1 TO 7)			1380
TRAINING ACTIVITIES BEYOND WORKING HOURS – 200 PERIODS			
8.	JBPTC/Hindi/ 1 to 6	Hindi Training	36
9.	JBPTC/WTC/ 1	Weak Trainees Classes / Night Classes	64
10.	JBPTC/GSD/ 1	General Service Duties & Stn Duties	100
TOTAL (SL NO 8 to 10)			200
GRAND TOTAL (SL NO 1 TO 10)			1580
TOTAL EFFECTIVE TRAINING PERIODS (FROM SL NO 2 TO 6 & 8 TO 10)			1400

COMMON ACTIVITIES

1. **Learning Objectives.** The objective of General Training for JBPTC is to provide opportunity to direct entry ab-initio airmen recruits to familiarise themselves with various service procedures and acquaint themselves with the Air Force environment so that they:-

- (a) Complete arrival formalities, initial documentation, and initial clothing issue.
- (b) Appear in Diagnostic Test (Education and PFR).
- (c) Know about Flight Safety, Maintenance Safety & Ground Safety aspects in IAF.
- (d) Know about the types & roles of aircraft in the inventory of the IAF.
- (e) Know about Intelligence & Counter Intelligence aspects.

2. **Scheme of Coverage Syllabus Indices**

2. Scheme of Coverage Syllabus Indices	Subject	Periods			
		T	D	P	Total
JBPTC / General-1	Arrival			08	08
JBPTC / General-2	Clothing Issue & Filling of IAFF (Q) 466			20	20
JBPTC / General-3	Documentation			06	06
JBPTC / General-4	Motivational Lecture by Squadron Commander, Address by CI (BTI), CI (Training) & Stn Cdr	–	05		05
JBPTC / General-5	Lecture on Medical Hygiene, HIV / AIDS & Inoculation	02	01	04	07
JBPTC / General-6	Diagnostic Test / Trade Aptitude Test	–	–	05	05
JBPTC / General-7	Diagnostic Test PFR	–	–	03	03
JBPTC / General-8	Filling up of bio-data and one-to-one interaction between instructors and trainees	02	–	06	08
JBPTC / General-9	Filling up of TPRCs	-	-	03	03
JBPTC / General-10	Filling up of PAN Card applications	-	-	02	02
JBPTC / General-11	Bank account opening	-	-	03	03
JBPTC / General-12	Lecture by Civil Specialist on Stress	01	01	-	02
JBPTC / General-13	Lecture by Civil Psychologist	01	01	-	02

JBPTC / General-14	Trade Briefing	04	–	–	04
JBPTC / General-15	Lecture on Flight/Aerospace Safety, Cyber Security, Maintenance Safety, Ground Safety, Observation and immediate equipment reporting of unusual occurrence while performing security/routine duties	05	04	–	09
JBPTC / General-16	Lecture on handling of communication equipment and operation of base security equipment and weapons	02	01	–	03
JBPTC / General-17	Lecture on Intelligence & Counter Intelligence including latest security environment, threats, latest case studies of modus operandi adopted by ANEs	04	–	–	04
JBPTC / General-18	Clearance	–	–	06	06
TOTAL		21	13	64	100

TERM-I

1. Duration of Term-I : 16 Weeks.
2. Non-Training days considered : 04 weeks with second Saturday and 04 days close holidays per Term.
3. Period available per Term : {(12 weeks x 6 days x 10 periods)
+ (04 weeks x 5 days x 10 periods)
– (04 days CH x 10 periods)}
= 880 periods.

<u>Common Activities</u>		
(a)	Health Run, PT and OTW	166 Periods
(b)	GST	48 Periods
(c)	GSD (Mentoring, counseling and other allied activities like guest lecture etc for personality development)	30 Periods
(d)	Mid Term Examination	04 Periods
(e)	End Term examination	32 Periods
Total		280 Periods

<u>Common Subjects</u>		
(a)	English	100 Periods
(b)	Computer & IW Fundamentals	30 Periods
Total		130 Periods

Term-I Summary:

Common Activities	Common Subjects	Trade Subjects		Total
		ATS System	Total	
280	130	470	470	880
Trade Subjects in Term-I				470 Periods

TERM- I
OPS ASST TRADE SUBJECT
AIR TRAFFIC SERVICES
Scheme of Coverage

Syllabus Index	Topic	Period				
		T	D	P	M	Total
OPS ASST/ATS/1	Introduction and Objectives of ATS	2	0	0	0	2
OPS ASST/ATS/2	ATS Organisation in IAF	2	0	0	0	2
OPS ASST/ATS/3	Physical Characteristics and Layout of IAF Aerodromes.	3	1	1	0	5
OPS ASST/ATS/4	Standard Dimensions of area associated with the Aerodromes.	2	2	0	0	4
OPS ASST/ATS/5	Aerodrome Reference Point	1	1	0	0	2
OPS ASST/ATS/6	Aerodrome: Siting, Classification, Categorization and Grading	4	0	0	0	4
OPS ASST/ATS/7	Visual Aids For Navigation: DTGM, Signal Square, Landing 'TEE' and Wind Direction Indicator	5	0	4	0	9
OPS ASST/ATS/8	Aerodrome Markings and Declared Distances	9	0	16	0	25
OPS ASST/ATS/9	Aerodrome Electrical Lighting System and Other Lighting Aids To Air Navigation	8	2	4	0	14
OPS ASST/ATS/10	Division of Air Traffic Services, Designation of Airspace and ATS Units	8	0	0	0	8
OPS ASST/ATS/11	Introduction To Air Defence & Its Constituent	12	0	5	0	17
OPS ASST/ATS/12	Aerodrome Control Service: Traffic & Taxi Circuit	2	0	0	0	2
OPS ASST/ATS/13	Aerodrome Control Service: Essential Information on Aerodrome Condition	1	0	0	0	1
OPS ASST/ATS/14	Aerodrome Control: Day and Night	2	0	0	0	2
OPS ASST/ATS/15	Selection of Runway- In -Use and Action Taken on Change of Runway	2	0	0	0	2
OPS ASST/ATS/16	Arrester Barriers: System, Operation, Maintenance and Engagement	5	0	3	0	8
OPS ASST/ATS/17	Methods of Local Control of Aircraft by Aldis Lamp Signalling and Pyrotechnic Signals	3	0	8	0	11
OPS ASST/ATS/18	Control of Other than Aircraft Traffic on Manoeuvring area: Commn and Light	4	0	5	0	9

	Signals					
OPS ASST/ ATS/19	Snow Clearance and Runway Sweeping	2	0	0	0	2
OPS ASST/ ATS/20	Aerodrome Inspection, Procedure&Check list	6	0	10	0	16
OPS ASST/ ATS/21	Factors Affecting Runway Length	2	0	0	0	2
OPS ASST/ ATS/22	Night Flying Equipment and Their Maintenanc	3	1	8	0	12
OPS ASST/ ATS/23	Altimeter Setting Procedure	4	0	2	0	6
OPS ASST/ ATS/24	Emergency Layout of Goosenecks Flares	2	0	8	0	10
OPS ASST/ ATS/25	Aerodrome Lighting During Hostilities	2	0	8	0	10
OPS ASST/ ATS/26	Helipad: Physical Characteristics and Layout	2	0	7	0	9
OPS ASST/ ATS/27	Exercise Control of Helicopter and Helipad Layout During Night	4	0	6	0	10
OPS ASST/ ATS/28	Obstructions Marking by Day and Night	4	0	12	0	16
TOTAL		10	7	10	0	220
		6		7		

TERM-II

(a) Duration of Term-II: 16 Weeks.

(b) Non-Training days considered: 04 weeks with second Saturday and 04 days close holidays per Term.

(c) Period available per Term: {(12 weeks x 6 days x 10 periods)
+ (04 weeks X 5 days x 10 periods)
– (04 days CH x 10 periods)}
= 880 periods.

<u>Common Activities</u>		
(a)	Health Run, PT and OTW	148 Periods
(b)	GST	48 Periods
(c)	GSD (Mentoring, counselling and other allied activities like guest lecture etc for personality development)	28 Periods
(d)	Mid Term Examination	04 Periods
(e)	Pre –REB	16 Periods
(f)	REB	88 Periods
Total		332 Periods
<u>Common Subjects</u>		
(a)	Computer & IW Fundamentals	37 Periods
Total		37 Periods
<u>Subjects Specific to Trade</u>		
(a)	Aerospace Safety-I	28 Periods
(b)	IMMOLS	20 Periods
Total		48 Periods

Tier II Summary:

Common Activities	Common Subjects	Subjects specific to Trade	Trade Subjects		Total
			<u>ATS subj</u>	<u>Total</u>	
332	37	48	463	463	880
Trade Subjects in Term-II					463 Periods

TERM- II
OPS ASST TRADE SUBJECT
AIR TRAFFIC SERVICES
Scheme of Coverage

Syllabus Index	Topic	Period				
		T	D	P	M	Total
OPS ASST/ AT/29	Display of Information, Registers and Log Books Maintained in FCC & Tower	8	0	8	0	16
OPS ASST/ AT/30	VMC, IMC, VFR and IFR Flights	6	0	4	0	10
OPS ASST/ AT/31	System of Cruising Levels	3	0	4	0	7
OPS ASST/ AT/32	ATS Routes, Advisory Routes, Airways and TMAs	4	0	5	0	9
OPS ASST/ AT/33	Abbreviations and Aerodromes Four Letter Location Indicators	2	0	3	0	5
OPS ASST/ AT/34	Pre – Flight Action	2	0	6	0	8
OPS ASST/ AT/35	ATS Messages and Air Operational Routine Orders (AOR)	8	0	26	0	34
OPS ASST/ AT/36	Phases of Aircraft emergencies and Methods of Communication	4	0	6	0	10
OPS ASST/ AT/37	Aircraft Diversion and Responsibilities of ATS Units	4	0	6	0	10
OPS ASST/ AT/38	Aircraft Overdue Action by ATS units	2	0	6	0	8
OPS ASST/ AT/39	Arrival and Departure Priorities	2	0	0	0	2
OPS ASST/ AT/40	Notification of Local Flying and Surface Movements	2	0	2	0	4
OPS ASST/ AT/41	Night Flying Operations : Conduct, Notification and Actions	8	4	14	0	26
OPS ASST/ AT/42	VVIP/VIP movements at IAF aerodromes: Restrictions & Notification	3	0	4	0	7
OPS ASST/ AT/43	Role of ATC units for VVIP/VIP Flights	4	0	4	0	8
OPS ASST/ AT/44	Use of Civil Aerodrome by Service Aircraft & Service Aerodrome by Civil Aircraft	3	0	0	0	3
TOTAL		65	4	98	0	167

TERM-III

1. Duration of Term-III : 16 Weeks.
2. Non-Training days considered : 04 weeks with second Saturday and 04 days close holidays per Term.
3. Period available per Term : {(12 weeks x 6 days x 10 periods)
+ (04 weeks X 5 days x 10 periods)
– (04 days CH x 10 periods)}
= 880 periods.

<u>Common Activities</u>		
(a)	Health Run, PT and OTW	166 Periods
(b)	GST	48 Periods
(c)	GSD (Mentoring, counselling and other allied activities like guest lecture etc for personality development)	30 Periods
(d)	Mid Term Examination	04 Periods
(e)	End Term examination	32 Periods
Total		280 Periods

Common Subjects Nil

<u>Common Subjects Specific to Trade</u>	
Aerospace Safety-II	28 Periods
Total	28 Periods

Common Activities	Common Subjects	Subjects specific to Trade	Trade Subjects		Total
			ATS System	Total	
280	--	28	572	572	880
Trade Subjects in Term-III					572 Periods

TERM- III: OPS ASST TRADE SUBJECT
AIR TRAFFIC SERVICES: Scheme of Coverage

Syllabus Index	Topic	Period				
		T	D	P	M	Total
OPS ASST/ ATS/45	Approach Control Service : Responsibility and Provision	6	0	10	0	16
OPS ASST/ ATS/46	Area Control Service: Responsibility and Provision	6	0	10	0	16
OPS ASST/ ATS/47	Coordination between ATC Units	6	0	10	0	16
OPS ASST/ ATS/48	Flight Information Service: Responsibility and Provision	6	0	10	0	16
OPS ASST/ ATS/49	Landing and Housing Charges: Application and Calculation	8	0	24	0	32
OPS ASST/ ATS/50	Action by ATS Units for Aircraft Diversion, Overdue and Distress	3	0	6	0	9
OPS ASST/ ATS/51	Units, Symbols and Data Displayed in ATS	3	0	10	0	13
OPS ASST/ ATS/52	ICAO and ATS Publications	2	2	0	0	4
OPS ASST/ ATS/53	Aeronautical Information Service	6	0	16	0	22
OPS ASST/ ATS/54	Standard R/T Phraseology: Circuit and Landing	10	0	36	0	46
OPS ASST/ ATS/55	Separation Standard, Vertical and Horizontal	3	0	0	0	3
OPS ASST/ ATS/56	Reduced Vertical Separation Minima (RVSM)	3	0	0	0	3
OPS ASST/ ATS/57	Post-Accident Plan	3	0	6	0	9
OPS ASST/ ATS/58	Maintenance and Preservation of ATS Log Books, Local Order Books and Folders.	3	0	0	0	3
OPS ASST/ ATS/59	Care and Maintenance of Classified Document	4	0	0	0	4
OPS ASST/ ATS/60	Liaison between ATS Section and Other Sections	2	0	0	0	2
OPS ASST/ ATS/61	Mechanical Runway Sweeper (MRS)	4	0	0	0	4
OpsAsst/ ATS/62	Follow Me Vehicle	2	0	4	0	6
OPS ASST/ ATS/63	Marshalling of aircraft and Standard Emergency Hand Signals between RCFF Crew & Air Crew by Day/ Night	2	0	10	0	12
OPS ASST/	Search and Rescue	9	0	4	0	13

Approved in 20th NSQC, 09.04.18

ATS/64						
OpsAsst/ATS/65	Flight Plan: Submission and Insertion of data	18	0	24	0	42
OpsAsst/ATS/66	Glossary: Terms & Definitions	2	0	0	0	2
TOTAL		111	2	180	0	293

NSQC Approved

TERM-IV

1. Duration of Term-IV : 16 Weeks.
2. Non-Training days considered : 04 weeks with second Saturday and 04 days close holidays per Term.
3. Period available per Term : {(12 weeks x 6 days x 10 periods)
+ (04 weeks X 5 days x 10 periods)
– (04 days CH x 10 periods)} = 880 periods.

Common Activities		
(a)	Health Run, PT and OTW(2x6x12+2x5x4-2x5)	144 Periods
(b)	GST	48 Periods
(c)	General Skill Development	33 Periods
(d)	Mid Term Examination	04 Periods
(e)	Pre-REB (T) Exam	16 Periods
(f)	REB (T) Exam	88 Periods
(g)	POP	08 Periods
(h)	Clearance and Departure	08 Periods
Total		349 Periods

Common Subjects

Nil

Common Activities	Common Subjects	Subjects specific to Trade	Trade Subjects		Total
			ATS System	Total	
349	--	--	531	531	880
Trade Subjects in Term-IV					531 Periods

AIR TRAFFIC SERVICES: Scheme of Coverage

Syllabus Index	Topic	Period				
		T	D	P	M	Total
OPS ASST/ATS/67	Instrument Approach Procedure	10	0	14	0	24
OPS ASST/ ATS/68	Conduct of ATS Briefing	4	12	24	0	40
OPS ASST/ ATS/69	Various Scheduled ATS Return	5	0	12	0	17
OPS ASST/ ATS/70	Runway Controller Cabin: Siting, Facilities and Equipments.	4	0	10	0	14
OPS ASST/ ATS/71	ATS Staff Duties	5	0	10	0	15
OPS ASST/ ATS/72	Duties of Runway Controller	3	0	3	0	6
Ops Asst/ ATS/73	Duties of IC Night Flying Stores	2	0	2	0	4
OPS ASST/ ATS/74	Duties and responsibilities of IC airfield works	2	0	4	0	6
OPS ASST/ ATS/75	Duties of In-charge Section	2	0	0	0	2
OPS ASST/ ATS/76	Duties and Responsibilities of SATCO/ ATC Officer/ Senior Flying Supervisor	2	0	0	0	2
OPS ASST/ ATS/77	MAFI project at IAF Aerodrome	6	0	8	0	14
OPS ASST/ ATS/78	Glossary: Terms and Definitions	2	0	0	0	2
Total		47	12	87	0	146

OPS ASST
SCHEDULE OF TRAINING

16 Weeks (880 Periods) x4 = 64 Weeks (3520 Periods)

SI No	Syllabus	Periods																				Total Periods
		Term - I (16 Wks)					Term - II (16 Wks)					Term -III (16 Wks)					Term -IV (16 Wks)					
		T	D	P	M	Total	T	D	P	M	Total	T	D	P	M	Total	T	D	P	M	Total	
1	Common activities	5	0	209	66	280	8	0	188	136	332	1	4	209	66	280	9	0	183	157	349	1241
2	Common subjects	30	5	95	0	130	19	5	13	0	37	0	0	0	0	0	0	0	0	0	0	167
3	Subjects specific to trade	0	0	0	0	0	39	5	4	0	48	21	2	0	5	28	0	0	0	0	0	76
4	Trade subjects	209	11	230	20	470	164	6	273	20	463	179	2	371	20	572	118	12	285	116	531	2036
Total (periods)		244	16	534	86	880	230	16	478	156	880	201	308	580	91	880	127	12	468	273	880	3520

ROLE OF OPS ASST AS ENUMERATED IN AFO 57/15

OPERATIONAL ASSISTANT: GROUP 'Y' AIRCRAFTMAN	
Possess knowledge of and without supervision is able to undertake:-	
<p>1. As Airman on watch</p> <p>(a) Maintain a continuous watch on all visible flight operations on and in the vicinity of the aerodrome including aircraft, vehicles and personnel on maneuvering area and assist in control of such traffic by standard light and pyrotechnic signals</p> <p>(b) Display ground control signals as and when required.</p>	<p>1.</p> <p>(a)</p> <p>(i) Objective and functions of the Air Traffic Control services, rules of the air, visual flight rules and instrument flight rules.</p> <p>(ii) Regulation for the local control of Air traffic, action in the event of accident and air crashes, control of MT vehicles and personnel within the aerodrome boundary, breaches of traffic discipline.</p> <p>(iii) Air ground, light & pyrotechnic signal, traffic signal to vehicles.</p> <p>(iv) Firing Vary pistol, usage of different colours of signal cartridges, GFI, PFF and smoke generator and life period of signal cartridges</p> <p>(v) Co-ordination with runway controller.</p> <p>(vi) Cloud type and amount; wind Direction, speed; visibility, atmospheric pressure, QFF, QFE, QNH and METAR report, SPECIAL and SPECI reports.</p> <p>(vii) Direction on earth, variation and deviation on course, track and drift. Units of measuring distances, methods of reporting positions, definitions of ground position, air position and Dead reckoning position.</p> <p>(b) Knowledge of ground control signals, flag signals and recall signals.</p>

<p>(c) Keep a listening out watch of the exchange of communication between Air Traffic Control and aircraft and maintain an up-to-date record of all landings and take offs in his watch log.</p> <p>(d) Check up from IAFF (AO) 1201 and other clearances received from the Captain of an aircraft, record the particulars in his log book and the appropriate boards provided and obtains clearance for the aircraft from the Air Traffic Control Centre concerned and the aerodrome of destination.</p> <p>(e) Prepares and dispatches Air Traffic Control Messages in respect of the movements of out bound aircraft and receives, action and files these in respect of the movement of inbound aircraft</p> <p>(f) Obtains and displays aeronautical information in respect of all other aerodromes and notifies the same to appropriate units in respect of parent aerodrome.</p> <p>(g) Takes appropriate</p>	<p>(c) Elementary knowledge of radio telephone communication procedure, phonetic alphabet, R/T procedure, words and phrases, maintaining Aircraft movement log book.</p> <p>(d) (i) Flight procedure for flights under aerodrome control, approach control and for flight information region. (ii) Definitions of cruising level, Semi-circular systems of cruising level, Speed, airspeed, ground speed, rectified airspeed & true airspeed. (iii) Knowledge of radio navigational aids installed at the aerodrome and its corresponding equipment onboard aircraft. (iv) Maps and charts, Map reading. (v) Liaison with Met, Navigation and communication briefing sections. (vi) Co-ordination with the parent Air Traffic Control Centre.</p> <p>(e) Types and elements of Air Traffic Control messages, their origination, compilation and distribution.</p> <p>(f) Aeronautical information and the sources of its collection, NOTAM code, origination, compilation and distribution of NOTAMs and briefing messages, FLIP.</p> <p>(g) Meteorological reports, forecasts and</p>
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<p>action as defined in local orders on receipt of met warnings.</p> <p>(h) Prepares landing and housing charges in respect of civil aircraft and keeps an appropriate record of such bills.</p> <p>(j) Attends to all telephone calls and answers queries in respect of movement of aircraft.</p> <p>2. As member of the crash crew:-</p> <p>(a) Man the crash tender</p> <p>(b) Operate and carry out the daily inspection of the crash tender and fire pump.</p> <p>(c) Carry out fire fighting operations</p> <p>3. (a) As member of the flare path party, layout of visual landing aids during night / poor visibility conditions.</p> <p>(b) Keep the items of night flying equipment in the fittest state of serviceability and readiness</p> <p>(c) Layout of flare path.</p>	<p>forecast warnings.</p> <p>(h) AFI 01/95 and latest rates of landing housing charges for domestic and international civil aircraft.</p> <p>(j) Telephone communication procedure and proficiency in handling land line while adhering to directions issued on „Security of communication“ issued from time to time.</p> <p>2.</p> <p>(a) Fire- Method of extinguishing fire</p> <p>(b) General causes of outbreak of fires in aircraft and classification of aircraft crashes.</p> <p>(c) Crash tender drill, crew position, action on crash fire alarm, action by each member of the crew during approach to crash, positioning of the crash tender and actual operation of the CFT at site of the crash.</p> <p>(d) Aerodrome crash fire tender and its foam producing and other ancillary equipment; foam, water pump and primer, controls and instruments, operations of the foam unit, valve setting, Controls and instrument, maintenance and operation of Dry Chemical Powder Extinguisher storing of foam hose.</p> <p>(e) Control and extinguishing of fire, rules of combating aircraft fires, use of protective clothing and the fire equipment fitted on a crash tender.</p> <p>(f) The usual and emergency means of entrance to and exist from aircraft and easiest break in points, and rescue of occupants. Making ejection seat safe, operation of canopy, main battery.</p>
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	<p>3. (a) Operation of aerodrome beacon</p> <p>(b) Approved scale of portable lighting equipment and its up keep, testing and changing of batteries of light markers</p> <p>(c) Aerodrome layout, runway strips, approaches.</p> <p>(d) Standard and emergency flare path layout, lighting of aerodrome obstructions.</p>
<p>4. Carry out arrester barrier operation.</p>	<p>4. Basic knowledge of Arrester barrier operations.</p>

LEADING AIRCRAFTMAN

Possess ability to carry-out the entire range of work of an **AIRCRAFTMAN** with better proficiency and speed and in addition is able to undertake:-

<p>1. As airman on watch</p> <p>(a) Assist in the initiation of emergency action.</p> <p>(b) Usage of available radio/ radar aids used to assist an aircraft in homing, holding and landing</p> <p>2. As duty air traffic clerk, assists in alerting search and rescue.</p> <p>3. As a member of flare path party lay out emergency flare path and inspection of permanent lighting installations including obstruction lights.</p>	<p>1. (a) Roles, performance and limitation of IAF aircraft and elements of aircraft recognition.</p> <p>(b) The principles of dead reckoning navigation and the use of navigation computer.</p> <p>(c) Categories of the state of emergency and emergency procedure; action in the event of communication failure and other technical defects being experienced in the air/ground.</p> <p>(d) Overdue action and diversion of aircraft.</p> <p>(e) General characteristics, communication ranges and uses and limitation of various radio/ radar aids and their associated air-borne equipment.</p> <p>2. Assist SAS & IO in Search and rescue services.</p> <p>3. Layout of emergency flare path and operation of DRCD.</p>
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REGIONAL EXAMINING BOARD (T)
BLUE PRINT : LAC PROMOTION EXAMINATION (IPT) SYSTEM THEORY

Type of Exam : AC/LAC Time : 50 Mins
 Trade : OPS ASST
 System : OPS ASST
 Pattern of Training : IPT Marks : 50

Sl No	SUBJECT	TRG HRS	WEIGHTAGE OF MARKS	MULTIPLE CHOICE QUESTIONS			
		THEORY		FAC T 20%	COM P 50%	APP L 30%	QUE S/ MAR KS
1	Air traffic services & ATS section Admin	380.00	25	4	13	8	25/25
2	Aircraft Rescue & crash fire fighting	173.00	12	2	6	4	12/12
3	Aircraft operations & regulations	56.00	4	1	2	1	4/4
4	Meteorology	38.00	2	1	1	-	2/2
5	Communication	24.00	2	-	1	1	2/2
6	Air Navigation	30.00	2	1	1	-	2/2
7	Logistic Procedure (IMMOLS).	-	1	1	-	-	1/1
8	Aerospace /Maintenance Safety.	-	1	-	-	1	1/1
9	Tech Admin	-	1	-	-	1	1/1
Total Question / Marks		701	50	13	25	12	50/50