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Physical Standards

MEDICAL STANDARDS FOR AIR FORCE COMMON ADMISSION ONLINE TEST FOR FLYING BRANCH AND GROUND DUTIES (TECHNICAL AND NON-TECHNICAL)/ NCC SPECIAL ENTRY/ METEOROLOGY ENTRY

General Instructions

1. In this section the assessment of candidates for commissioning through AFCAT for flying and ground duty branches /NCC special entry/meteorology into in the IAF is considered.

2. The basic requirements of medical fitness are essentially the same for all branches, except for aircrew in whom the parameters for visual acuity, anthropometry and certain other physical standards are more stringent. A candidate will not be assessed physically fit unless the examination as a whole shows that he is physically and mentally capable of withstanding severe physical and mental strain for prolonged periods in any climate in any part of the world.

3. The medical standards spelt out pertain to initial entry medical standards. If, however, any disease or disability is detected during the training phase, which will have a bearing on the flight cadets subsequent physical fitness and medical category; such cases will be referred expeditiously to IAM (for aircrew)/ specialists of MH (for non-aircrew) under intimation to the office of DGMS (Air)-Med-7. At IAM, if the disease or disability is considered of a permanent nature, an early decision for the cadet to continue in the service/ branch/ stream is to be taken. Specific waivers of DGMS (Air), if asked for, must carry full justification in accordance with relevant Para of IAP 4303 4th edition (revised).

General Medical and Surgical Assessment

4. Every candidate to be fit for the Air Force must conform to the minimum standards laid down in the succeeding paragraphs. The general build should be well developed and proportionate.

5. The residual effects of fractures/ old injuries are to be assessed for any functional limitation. If there is no effect on function, the candidate can be assessed

fit. Cases of old fractures of spine are unfit. Any residual deformity of spine or compression of a vertebra will be cause for rejection. Injuries involving the trunks of the larger nerves, resulting in loss of function, or scarring, which cause pain or cramps, indicate unsuitability for employment in flying duties. The presence of large or multiple keloids will be a cause for rejection.

6. Minor scars and Birth Marks for e.g. as resulting from the removal of tuberculous glands do not, per se, indicate unsuitability for employment on flying duties. Extensive scarring of a limb or torso that may cause functional limitation or unsightly appearance should be considered unfit.

7. Cervical rib without any neurovascular compromise will be accepted. This will be recorded in the medical board proceedings.

8. Asymmetry of the face and head, which will interfere with proper fitting of oxygen mask and helmet, will be a cause for rejection for flying duties.

9. A candidate who has undergone an abdominal operation, other than a simple appendicectomy, involving extensive surgical intervention or partial or total excision of any organ is unsuitable for flying duties. Operation involving the cranial vault (e.g. trephining), or extensive thoracic operations make the candidate unfit for flying.

10. The chest should be well proportioned and well developed with the minimum range of expansion of 5 cm.

11. Height, Sitting Height, Leg Length and Thigh Length

(a) The minimum height for entry into ground duty branches will be 157.5 cm. Gorkhas and individuals belonging to North Eastern regions of India and hilly regions of Uttarakhand, the minimum acceptable height will be 5 cm less (152.5 cm). In case of candidates from Lakshadweep, the minimum acceptable height can be reduced by 2 cm (155.5 cm).

(b) Minimum height for Flying Branch will be 162.5 cm. Acceptable measurements of leg length, thigh length and sitting height for such aircrew will be as under: -

(i) Sitting height: Minimum- 81.5 cm Maximum- 96.0 cm

(ii) Leg Length: Minimum- 99.0 cm Maximum- 120.0 cm

(iii) Thigh Length: Maximum- 64.0 cm

12. The height and weight chart prescribed is placed at Appendix B to the draft

rules will be applicable.

13. Cardiovascular System

(a) History of chest pain, breathlessness, palpitation, fainting attacks, giddiness, rheumatic fever, chorea, frequent sore throats and tonsillitis will be given due consideration in assessment of the cardiovascular system.

(b) The normal pulse rate varies from 60-100 bpm. Persistent sinus tachycardia (> 100 bpm), after emotional factors and fever are excluded as causes, as well as persistent sinus bradycardia (< 60 bpm), will be referred for specialist opinion to exclude organic causes. Sinus arrhythmia and vagotonia will also be excluded.

(c) Candidates are quite prone to develop White Coat Hypertension, which is a transient rise of BP, due to the stress of medical examination. Every effort must be made to eliminate the White Coat effect by repeated recordings under basal conditions. When indicated, ambulatory BP recording must be carried out or the candidate be admitted to hospital for observation before final fitness is certified. An individual with BP consistently greater than or equal to 140/90 mm of Hg will be rejected.

(d) Evidence of organic cardiovascular disease will be cause for rejection. Diastolic murmurs are invariably organic. Short systolic murmurs of ejection systolic nature and not associated with thrill and which diminish on standing, especially if associated with a normal ECG and chest radiograph, are most often functional. However, an echocardiogram will be done to exclude organic heart disease. In case of any doubt the case will be referred to cardiologist for opinion.

(e) Electrocardiogram. Assessment of a properly recorded ECG (resting – 14 lead) will be carried out by a medical specialist. Note will be taken of wave patterns, the amplitude, duration and time relationship. At initial entry no abnormalities are acceptable except incomplete RBBB in the absence of structural heart disease, which must be excluded. In such cases, opinion of Senior Adviser (Medicine) or Cardiologist will be obtained.

14. Respiratory System

(a) Any residual scarring in pulmonary parenchyma or pleura, as evidenced by a demonstrable opacity on chest radiogram will be a ground for rejection. Old treated cases of Pulmonary Tuberculosis with no significant residual abnormality can be accepted if the diagnosis and treatment was completed more than two year earlier. In these cases, a CT scan chest and fibreoptic bronchoscopy with bronchial lavage will be done alongwith USG, ESR, PCR, Immunological tests and Mantoux

test as decided by the Physician. If all the tests are normal the candidate may be considered fit. However, in such cases fitness will only be decided at Appeal/ Review Medical Board.

(b) Pleurisy with Effusion. Any evidence of significant residual pleural thickening will be a cause for rejection.

(c) History of repeated attacks of cough/ wheezing/ bronchitis may be manifestations of chronic bronchitis or other chronic pathology of the respiratory tract. Such cases will be assessed unfit. Pulmonary Function Tests will be carried out, if available.

(d) History of repeated attacks of bronchial asthma/ wheezing/ allergic rhinitis will be a cause for rejection.

(e) Radiographs of the Chest. Definite radiological evidence of disease of the lungs, mediastinum and pleurae indicates unsuitability for employment in Air Force. If required, investigations as outlined in Para 14 (a) above will be carried out under the advice of a Chest Physician.

15. Gastrointestinal System

(a) Any past history of ulceration or infection of the mouth, tongue, gums or throat will be taken note of including any major dental alteration.

(b) The following dental standards will be followed:-

(i) Candidate must have 14 dental points and the following teeth must be present in the upper jaw in good functional opposition with the corresponding teeth in the lower jaw, and these must be sound or repairable:-

(aa) Any four of the six anteriors

(ab) Any six of the ten posteriors

(ac) They should be balancing on both sides. Unilateral mastication is not allowed.

(ad) Any removable or wired prosthesis are not permitted.

(ii) Candidate whose dental standard does not conform to the laid down standard will be rejected.

(iii) Candidate with dental arches affected by advanced stage of generalised active lesions of pyorrhoea, acute ulcerative gingivitis, and gross abnormality of

the teeth or jaws or with numerous caries or septic teeth will be rejected.

(c) Gastro-Duodenal Disabilities. Candidates who are suffering or have suffered, during the previous two years, from symptoms suggestive of chronic indigestion, including proven peptic ulceration, are not to be accepted, in view of the exceedingly high risk of recurrence of symptoms and potential for incapacitation. Any past surgical procedure involving partial or total loss of an organ (other than vestigial organs/gall bladder) will entail rejection.

(d) If past history of jaundice is noted or any abnormality of the liver function is suspected, full investigation is required for assessment. Candidates suffering from viral hepatitis or any other form of jaundice will be rejected. Such candidates can be declared fit after a minimum period of 6 months has elapsed provided there is full clinical recovery; HBV and HCV status are both negative and liver functions are within normal limits.

(e) Candidates who have undergone splenectomy are unfit, irrespective of the cause for operation. Splenomegaly of any degree is a cause for rejection.

(f) A candidate with a well-healed hernia scar, after successful surgery, will be considered fit six months after surgery, provided there is no potential for any recurrence and the abdominal wall musculature is good.

(g) Abdominal Surgery

(i) A candidate with well-healed scar after conventional abdominal surgery will be considered fit after one year of successful surgery provided there is no potential for any recurrence of the underlying pathology and the abdominal wall musculature is good.

(ii) A candidate after laparoscopic cholecystectomy will be considered fit if 08 weeks have passed since surgery provided they are free from signs and symptoms and their evaluation including LFT and USG abdomen are normal and there is total absence of gall bladder with no intra-abdominal collection. Other abdominal laproscopic procedures can also be considered fit after 08 weeks of surgery provided the individual is asymptomatic, recovery is complete and there is no residual complication or evidence of recurrence.

(h) Disposal of cases with incidental ultrasonographic (USG) findings like fatty liver, small cysts, haemangiomas, septate gall bladder etc., will be based on clinical significance and functional limitation. A methodically conducted USG examination should look for the following areas during the examination. The findings as listed in the succeeding paragraphs and other incidental USG findings

reported will be evaluated on clinical significance and functional capacity by the concerned specialist.

(j) Liver

(i) Fit

(aa) Normal echoanatomy of the liver, CBD, IHBR, portal and hepatic veins with liver span not exceeding 15 cm in the mid- clavicular line.

(ab) Solitary simple cyst (thin wall, anechoic) upto 2.5 cm diameter.

(ii) Unfit

(aa) Hepatomegaly more than 15 cm in mid-clavicular line.

(ab) Fatty liver

(ac) Solitary cyst > 2.5 cm

(ad) Solitary cyst of any size with thick walls, septations and debris

(ae) Any calcifications more than 03 mm in size.

(af) More than three calcifications even if each is less than 03 mm in size.

(ag) Multiple hepatic cysts of any size.

(ah) Hemangioma > 02cm.

(aj) Portal vein thrombosis.

(ak) Evidence of portal hypertension (PV >13 mm, collaterals, ascites).

(iii) During Appeal Medical Board/ Review Medical Board unfit candidates will be subjected to specific investigations and detailed clinical examination. Fitness for specific conditions will be decided as given below:-

(aa) Fatty Liver may be considered fit in non-obese individual with normal LFT, no metabolic abnormality and negative HBsAg and Anti-HCV serology.

(ab) Solitary simple cyst 2.5 - 05 cm will be further evaluated with LFT, CECT abdomen, and hydatid serology. Will be considered fit if LFT is normal, hydatid

serology is negative and CECT confirms USG findings.

(ac) Any liver calcifications, irrespective of size and number be considered fit provided after due investigations it is revealed that there is no evidence of active disease like tuberculosis, sarcoidosis, hydatid disease, metastatic tumour or liver abscess based on relevant clinical examination and investigations (LFT, hydatid serology, etc.).

(k) Gall Bladder

(i) Fit

(aa) Normal echoanatomy of the gall bladder.

(ab) Post laparoscopic Cholecystectomy. Candiates having undergone lap-cholecystectomy may be considered fit if 08 weeks have passed since surgery and there is total absence of gall bladder with no intra- abdominal collection. Wound should have healed well without incisional hernia.

(ac) Open Cholecystectomy. Candidates having undergone open Cholecystectomy may be considered fit if one year has passed since surgery, the scar is healthy with no incisional hernia and there is total absence of gall bladder with no intra- abdominal collection.

(ii) Unfit.

(aa) Cholelithiasis or biliary sludge.

(ab) Choledocolithiasis.

(ac) Polyp of any size and number.

(ad) Choledochal cyst.

(ae) Gall bladder mass.

(af) Gall bladder wall thickness > 05 mm.

(ag) Septate gall bladder.

(ah) Persistently contracted gall bladder on repeat USG.

(aj) Incomplete Cholecystectomy.

(l) Spleen more than 13 cm in longitudinal axis (or if clinically palpable), any Space Occupying Lesion and Asplenia will be considered Unfit.

(m) Any structural abnormality of the Pancreas, Space Occupying Lesion/ Mass Lesion, Features of chronic pancreatitis (calcification, ductular abnormality, atrophy) will be considered Unfit.

(n) Peritoneal Cavity. Ascites, Solitary mesenteric or retroperitoneal lymph node >1 cm and Two or more lymph nodes of any size will be considered Unfit.

(o) Urogenital System.

(i) A simple non obstructive renal cyst of less than 2.5 cm size in one kidney will be considered fit.

(ii) The following congenital structural abnormalities of kidneys will be declared unfit.
(aa) Unilateral renal agenesis.

(ab) Unilateral or bilateral hypoplastic/ contracted kidney of size less than 08 cm.

(ac) Malrotation.

(ad) Horseshoe kidney.

(ae) Ptosed kidney.

(af) Crossed fused/ ectopic kidney.

(iii) Simple single renal cyst of more than 2.5 cm size in one kidney.

(iv) Single cyst of any size in both kidneys or multiple cysts in one kidney.

(v) Renal/ ureteric/ vesical mass.

(vi) Hydronephrosis, Hydroureteronephrosis.

(vii) Calculi - Renal/ Ureteric/ Vesical.

(viii) During Appeal Medical Board/ Review Medical Board, unfit candidates will be subjected to specific investigations and detailed clinical examination. Fitness for specific conditions will be decided as given below:-

(aa) Candidates having isolated abnormality of echo texture of Kidney may be considered fit if Renal Function, DTPA scan and CECT kidney is normal.

(p) Major Abdominal Vasculature (Aorta/ IVC). Any structural abnormality, focal ectasia, aneurysm and calcification will be considered Unfit.

(q) Scrotum and Testis

(i) Unlilateral intraabdominal testes, provided the other testes is completely descended will be declared fit.

(ii) Bilateral undescended testes or bilateral atrophied testis will be declared unfit.

(iii) Unilateral undescended testis if it lies in the inguinal canal, at the external ring or in the abdominal wall will be declared unfit.

(iv) Varicocele will be unfit.

16. Urogenital System

(a) Any alteration in micturition, e.g. dysuria or frequency will be noted. Recurrent attacks of cystitis; pyelonephritis and haematuria must be excluded. Any history of renal colic, attacks of acute nephritis, any operation on the renal tract including loss of a kidney, passing of stones or urethral discharges will be enquired in detail. If there is any history of enuresis, past or present, full details must be obtained.

(b) Urine Examination

(i) Proteinuria will be a cause for rejection, unless it proves to be orthostatic.

(ii) When glycosuria is detected, a blood sugar examination (fasting and after 75 g glucose) and glycosylated Hb is to be carried out, and fitness decided as per results. Renal glycosuria is not a cause for rejection.

(iii) When the candidate has history or evidence of urinary infection it will entail full renal investigation. Persistent evidence of urinary infection will entail rejection.

(iv) Candidates with history of haematuria will be subjected to full renal investigation.

(c) Glomerulonephritis

(i) There is a high rate of recovery in the acute phase, particularly in childhood. A candidate who has made a complete recovery and has no proteinuria may be assessed fit, after a minimum period of one year after full recovery.

(ii) Candidate with chronic glomerulonephritis will be rejected.

(d) Renal Colic and Renal Calculi. Complete renal and metabolic evaluation is required. Candidates with renal calculi will be rejected.

(e) All candidates found to have congenital absence of one kidney or who have undergone unilateral nephrectomy will be rejected. Presence of horseshoe kidney will entail rejection. Solitary functioning kidney with diseased, non-functional contralateral kidney will entail rejection. Crossed ectopia, unascended or malrotated kidney(s), unilateral congenital hypoplasia will be a cause for rejection.

(f) Bilateral undescended testis /atrophied testis will be a cause for rejection. Unilateral undescended testis, if entirely retained in the abdomen, is acceptable. If it lies in the inguinal canal, at the external ring or in the abdominal wall, such cases may be accepted after either orchidectomy or orchipexy operation. In all doubtful cases, surgical opinion must be obtained regarding fitness.

(g) Hydrocele or Varicocele should be properly treated before fitness is considered. Minor degree of varicocele will not entail rejection.

(h) Sexual Transmitted Diseases and Human Immuno Deficiency Virus (HIV). Seropositive HIV status and/ or evidence of STD will entail rejection.

17. Endocrine System

(a) Generally any history suggestive of endocrine disorders will be a cause for rejection.

(b) All cases of thyroid swelling having abnormal iodine uptake and abnormal thyroid hormone levels will be rejected. Cases of simple goitre with minimal thyroid swelling, who are clinically euthyroid and have normal iodine uptake and normal thyroid functions may be accepted.

(c) Candidates detected to have diabetes mellitus will be rejected. A candidate with a family history of diabetes mellitus will be subjected to blood sugar (fasting and after glucose load) and Glycosylated Hb/ HbA1c evaluation, which will be recorded.

18. Dermatological System

(a) Borderline skin conditions will be referred to a dermatologist. Candidates who give history of sexual exposure to a Commercial Sex Worker (CSW), or have evidence of healed penile sore in the form of a scar will be declared permanently unfit, even in absence of an overt STD, as these candidates are likely 'repeaters' with similar indulgent promiscuous behavior.

(b) Acute non-exanthematous and non-communicable diseases, which ordinarily run a temporary course, need not be a cause of rejection. Diseases of a trivial nature, and those, which do not interfere with general health or cause incapacity, do not entail rejection.

(c) Certain skin conditions are apt to become active and incapacitating under tropical conditions. An individual is unsuitable for service if he has a definite history or signs of chronic or recurrent skin disease. Some such conditions are described below:-

(i) Some amount of Palmoplantar Hyperhydrosis is physiological, considering the situation that recruits face during medical examination. However, candidates with significant Palmoplantar Hyperhydrosis will be considered unfit.

(ii) Mild (Grade I) Acne Vulgaris consisting of few comedones or papules, localized only to the face may be acceptable. However, moderate to severe degree of acne (nodulocystic type with or without keloidal scarring) or involving the back will be considered unfit.

(iii) Any degree of Palmoplantar Keratoderma manifesting with hyperkeratotic and fissured skin over the palms, soles and heels will be considered unfit.

(iv) Ichthyosis Vulgaris involving the upper and lower limbs, with evident dry, scaly, fissured skin will be considered unfit. Mild xerosis (dry skin) may be considered fit.

(v) Candidates having any keloids will be considered unfit.

(vi) Clinically evident onychomycosis of finger and toe-nails should be declared unfit, especially if associated with nail dystrophy. Mild degree of distal discolouration involving single nail without any dystrophy may be acceptable.

(vii) Giant congenital melanocytic naevi, greater than 10 cm will be considered unfit, as there is a malignant potential in such large sized naevi.

(viii) Small sized callosities, corns and warts may be considered acceptable after treatment. However candidates with multiple common warts or diffuse palmoplantar mosaic warts, large callosities on pressure areas of palms and soles and multiple corns will be rejected.

(ix) Psoriasis is a chronic skin condition known to relapse and/or recur and hence will be considered unfit.

(x) Candidates suffering from minor degree of Leukoderma affecting the covered parts may be accepted. Vitiligo limited only to glans and prepuce may be considered fit. Those having extensive degree of skin involvement and especially, when the exposed parts are affected, even to a minor degree, will not be accepted.

(d) A history of chronic or recurrent attacks of skin infections will be cause for rejection. A simple attack of boils or sycosis from which there has been complete recovery may be considered for acceptance.

(e) Individuals who have chronic or frequently recurring attacks of a skin disease of a serious or incapacitating nature e.g. eczema will be assessed as permanently unfit and rejected.

(f) Any sign of Leprosy will be a cause for rejection.

(g) Naevus depigmentosus and Beckers naevus may be considered fit. Intradermal naevus, vascular naevi may be considered unfit.

(h) Mild Pityriasis Versicolor may be considered fit after treatment. Extensive Pityriasis Versicolor may be considered unfit.

(j) Tinea Cruris and Tinea Corporis may be considered fit on recovery.

(k) Scrotal Eczema may be considered fit on recovery.

(l) Canities (premature graying stain) may be considered fit if mild in nature and no systemic association is seen.

(m) Intertrigo may be considered fit on recovery.

(n) Sexually Transmitted Diseases including Genital Ulcers will be considered unfit.

(o) Scabies may be considered fit only on recovery.

19. Musculoskeletal System and Physical Capacity

(a) Assessment of the candidate‘s physique is to be based upon careful observation of such general parameters as apparent muscular development, age, height, weight and the correlation of this i.e. potential ability to acquire physical stamina with training. The candidate‘s physical capacity is affected by general physical development or by any constitutional or pathological condition.

(b) Past medical history of disease or injury of the spine or sacroiliac joints, either with or without objective signs, which has prevented the candidate from successfully following a physically active life, is a cause for rejection for commissioning. History of spinal fracture/prolapsed intervertebral disc and surgical treatment for these conditions will entail rejection.

(c) Mild kyphosis or lordosis where deformity is barely noticeable and not associated with pain or restriction of movement may be accepted. When scoliosis is noticeable or any pathological condition of the spine is suspected, radiographic examination of the appropriate part of the spine needs to be carried out.

(d) For flying duties, radiograph (AP and lateral views) of cervical, thoracic and lumbosacral spine will be carried out. For ground duties, radiographic examination of spine may be carried out, if deemed necessary.

(e) The following conditions detected radiologically will disqualify a candidate for Air Force Service:-

(i) Granulomatous disease of spine

(ii) Arthritis/Spondylosis

(aa) Rheumatoid arthritis and allied disorders.

(ab) Ankylosing Spondylitis.

(ac) Osteoarthrosis, spondylosis and degenerative joint disease.

(ad) Non-articular rheumatism (e.g. lesions of the rotator cuff, tennis elbow, recurrent lumbago etc.).

(ae) Misc disorders including SLE, Polymyositis, and Vasculitis.

(af) Spondylolisthesis/ Spondylolysis.

(ag) Compression fracture of vertebra.

(ah) Scheuerman‘s Disease (Adolescent Kyphosis).

(aj) Loss of cervical lordosis when associated with clinically restricted movements of cervical spine.

(ak) Unilateral/Bilateral cervical ribs with demonstrable neurological or circulatory deficit.

(iii) Any other abnormality as so considered by the specialist.

(f) The deformities/ diseases contained in the above para will be cause for rejection for all branches in IAF. In addition for candidates for flying branches, the under mentioned rules will also apply:-

(i) Spinal Anomalies acceptable for Flying Duties.

(aa) Bilateral complete sacralisation of LV5 and bilateral complete lumbarisation of SV1.

(ab) Spina bifida in sacrum and in LV5, if completely sacralised.

(ac) Complete block (fused) vertebrae in cervical and/or dorsal spine at a single level.

(ii) Spinal Conditions not acceptable for Flying Duties.

(aa) Scoliosis more than 15 degree as measured by Cobb‘s method.

(ab) Degenerative Disc Disease.

(ac) Atlanto - occipital and atlanto-axial anomalies

(ad) Hemi vertebra and/or incomplete block (fused) vertebra at any level in cervical, dorsal or lumbar spine and complete block (fused) vertebra at more than one level in cervical or dorsal spine.

(ae) Unilateral sacralisation or lumbarisation (complete or incomplete) at all levels and bilateral incomplete sacralisation or lumbarisation.

(g) Conditions Affecting the Assessment of Upper Limbs

(i) Candidate with an amputation of a limb will not be accepted for entry. Amputation of terminal phalanx of little finger on both sides is, however, acceptable.

(ii) Deformities of the upper limbs or their parts will be cause for rejection. Syndactyly and polydactyly will be assessed as unfit except when polydactyly is excised.

(iii) Painless limitation of movement of the wrist will be graded according to the degree of stiffness. Loss of dorsiflexion is more serious than loss of palmar flexion.

(iv) Slight limitation of movement of the elbow does not bar acceptance provided functional capacity is adequate. Ankylosis will entail rejection. Cubitus Valgus is said to be present when the carrying angle (angle between arm and forearm in anatomical posture) is exaggerated. In absence of functional disability and obvious cause like a fracture mal-union, fibrosis or the like, a carrying angle of upto 15° in male and 180 in female candidates would be acceptable.

(v) History of recurrent dislocation of shoulder will entail rejection.

(vi) Malunion/non-union of an old fracture clavicle will entail rejection.

(h) Conditions affecting the Assessment of Lower Limbs

(i) Mild cases of Hallux Valgus (less than 20 degrees), asymptomatic, without any associated corn /callosities/ bunion are acceptable. Other cases will entail rejection. Shortening of first metatarsal is also considered unfit.

(ii) Hallux Rigidus is not acceptable.

(iii) Isolated single flexible mild hammer toe without symptoms may be accepted. Fixed (rigid) deformity or hammer toe associated with corns, callosities, mallet toes or hyperextension at metatarsophalangeal joint (claw toe deformity) will be rejected.

(iv) Loss of any digit of the toes entails rejection.

(v) Extra digits will entail rejection if there is bony continuity with adjacent digits. Cases of syndactyly or loss of toes/fingers will be rejected.

(vi) Feet may look apparent flat. If the arches of the feet reappear on standing on toes, if the candidate can skip and run well on the toes and if the feet are supple, mobile and painless, the candidate is acceptable. Restriction of the movements of the foot will also be a cause for rejection. Rigidity of the foot, whatever may be the shape of the foot, is a cause for rejection.

(vii) Mild degree of idiopathic pes cavus is acceptable. Moderate and severe pes

cavus and pes cavus due to organic disease will entail rejection. All cases of Talipes (Club Foot) will be rejected.

(viii) Any significant limitation of movement of the ankle joints following previous injuries will not be accepted. However, cases with no history of recurrent trouble and having plantar and dorsiflexion movement of at least 20 degree may be assessed fit for ground duties. Fitness for aircrew duties will be based on functional evaluation.

(ix) History or clinical signs suggestive of internal derangement of knee joint will need careful consideration. Fitness in such cases will be based on functional evaluation and possibility/progression/recurrence of the treated pathology. Any ligamentous laxity is not accepted. ACL reconstruction surgery is to be considered unfit

(x) If the distance between the internal malleoli is less than 5 cm, without any other deformity, the candidate will be considered fit for Genu Valgum (Knock Knee). If the distance between the two internal malleoli is more than 5 cm, candidate will be declared unfit.

(xi) If the distance between the femoral condyles is within 10 cm the candidate will be considered fit for Genu Varum (Bow Legs).

(xii) If the hyperextension of the knee is within 10 degrees and is unaccompanied by any other deformity, the candidate will be accepted as fit for Genu Recurvatum.

(xiii) True lesions of the hip joint will entail rejection.

20. Central Nervous System

(a) A candidate giving a history of mental illness/ psychological afflictions requires detailed investigation and psychiatric referral. Such cases will be rejected. Family history and prior history of using medication is also relevant.

(b) History of insomnia, nightmares or frequent sleepwalking or bed-wetting, when recurrent or persistent, will be a cause for rejection.

(c) Severe or ‘throbbing’ Headache and Migraine. Common types of recurrent headaches are those due to former head injury or migraine. Other forms of occasional headache must be considered in relation to their probable cause. A candidate with migraine, which was severe enough to make him consult a doctor, will be a cause for rejection. Even a single attack of migraine with visual disturbance or ‘Migrainous epilepsy’ is a bar to acceptance.

(d) History of epilepsy in a candidate is a cause for rejection. Convulsions/ fits after the age of five are also a cause for rejection. Convulsions in infancy may not be of ominous nature provided it appears that the convulsions were febrile convulsions and were not associated with any overt neurological deficit. Causes of epilepsy include genetic factors, traumatic brain injury, stroke, infection, demyelinating and degenerative disorders, birth defects, substance abuse and withdrawal seizures. Seizures may masquerade as "faints" and therefore the frequency and the conditions under which "faints" took place must be elicited. Seizure attacks indicate unsuitability for flying, whatever their apparent nature.

(e) History of repeated attacks of heat stroke, hyperpyrexia or heat exhaustion bars employment for Air Force duties, as it is an evidence of a faulty heat regulating mechanism. A single severe attack of heat effects, provided the history of exposure was severe, and no permanent sequelae were evident is, by itself, not a reason for rejecting the candidate.

(f) A history of severe head injury or Concussion is a cause for rejection. The degree of severity may be gauged from the history of duration of Post Traumatic Amnesia (PTA). Other sequelae of head injury are post concussion syndrome which has subjective symptoms of headache, giddiness, insomnia, restlessness, irritability, poor concentration and attention deficits; focal neurological deficit, and post traumatic epilepsy. Post traumatic neuropsychological impairment can also occur which includes deficits in attention concentration, information processing speeds, mental flexibility and frontal lobe executive functions and psychosocial functioning. Fracture of the skull will not be a cause for rejection unless there is a history of associated intracranial damage or of depressed fracture or loss of bone. When there is a history of severe injury or an associated convulsive attack, an electroencephalogram will be carried out which must be normal. Presence of burr holes will be cause for rejection for flying duties, but not for ground duties. Each case is to be judged on individual merits. Opinion of Neurosurgeon and Psychiatrist must be obtained before acceptance.

(g) When a family history of Psychological Disorders like nervous breakdown, mental disease, or suicide of a near relative is obtained, a careful investigation of the personal past history from a psychological point of view is to be obtained. While such a history per se is not a bar to Air Force duties, any evidence of even the slightest psychological instability in the personal history or present condition, will entail rejection.

(h) If a family history of epilepsy is admitted an attempt should be made to determine its type. When the condition has occurred in a near (first degree) relative, the candidate may be accepted, if he has no history of associated

disturbance of consciousness, neurological deficit or higher mental functions and his electroencephalogram is completely normal.

(j) The assessment of emotional stability must include family and personal history, any indication of emotional instability under stress as evidenced by the occurrence of undue emotionalism as a child or of any previous nervous illness or breakdown. The presence of stammering, tic, nail biting, excessive hyperhydrosis or restlessness during examination is indicative of emotional instability.

(k) Candidates who are suffering from psychosis will be rejected. Drug dependence in any form will also be a cause for rejection.

(l) Mentally unstable and neurotic individuals are unfit for commissioning. Juvenile and adult delinquency, history of nervous breakdown or chronic ill health will be causes for rejection. Particular attention will be paid to such factors as unhappy childhood, poor family background, truancy, juvenile and adult delinquency, poor employment and social maladjustment records, history of nervous breakdown or chronic ill-health, particularly if these have interfered with employment in the past.

(m) Any evident neurological deficit (Organic Nervous Conditions) will call for rejection.

(n) Tremors are rhythmic oscillatory movements of reciprocally innervated muscle groups. Tremors occur in cases of excessive fright, anger, anxiety, intense physical exertion, metabolic disturbances including hyperthyroidism, alcohol withdrawl and toxic effects of lithium, smoking (nicotine) and excessive tea, coffee. Other causes of coarse tremor are Parkinsonism, cerebellar (intention) tremor, essential (familial) tremor, tremors of neuropathy and postural or action tremors.

(o) Candidates with stammering will not be accepted for Air Force duties. Careful assessment by ENT Specialist, Speech therapist, psychologist/ psychiatrist may be obtained in doubtful cases.

(p) EEG will be recorded for candidates for aircrew duties only in case there is history of epilepsy. Those with following EEG abnormalities in resting EEG or EEG under provocative techniques will be rejected for aircrew duties:-

(i) Background Activity. Focal, excessive and high amplitude beta activity/hemispherical asymmetry of more than 2.3 Hz/generalized and focal runs of slow waves approaching background activity in amplitude.

(ii) Hyperventilation. Paroxysmal spikes and slow waves/spikes/focal spike pattern.

(iii) Photo Stimulation. Bilaterally synchronous or focal paroxysmal spikes and slow waves persisting in post-photic stimulation period/suppression or driving response over one hemisphere.

(q) Non-specific EEG abnormality will be acceptable provided opinion of Neuropsychiatrist/ Neurophysician is obtained. In case an EEG is reported as abnormal, the candidate would be referred to CHAF (B) for a comprehensive evaluation by neurophysician followed by review by a Board at IAM IAF.
21. Ear, Nose and Throat

(a) Nose and Paranasal Sinuses

(i) Obstruction to free breathing as a result of a marked septal deviation is a cause for rejection. Post correction surgery with residual mild deviation with adequate airway will be acceptable.

(ii) Any septal perforation will entail rejection.

(iii) Atrophic rhinitis will entail rejection.

(iv) Cases of allergic rhinitis will entail rejection for flying duties.

(v) Any infection of paranasal sinuses will be declared unfit. Such cases will be accepted following successful treatment during Appeal Medical Board.

(vi) Multiple polyposis will be a cause for rejection.

(b) Oral Cavity and Throat

(i) Candidates where tonsillectomy is indicated will be rejected. Such candidates will be accepted after successful surgery during Appeal Medical Board.

(ii) The presence of a cleft palate will be a cause for rejection.

(iii) Any disabling condition of the pharynx or larynx including persistent hoarseness of voice will entail rejection.

(c) Obstruction or insufficiency of eustachian tube function will be a cause for rejection.

(d) The presence of tinnitus necessitates investigation of its duration,

localization, severity and possible causation. Persistent tinnitus is a cause for rejection, as it is liable to become worse through exposure to noise and may be a precursor to Otosclerosis and Meniere's disease.

(e) Specific enquiry will be made for any susceptibility to motion sickness. Such cases will be fully evaluated and, if found susceptible to motion sickness, they will be rejected for flying duties.

(f) A candidate with a history of dizziness needs to be investigated thoroughly.

(g) Hearing loss

(i) Free field hearing loss is a cause for rejection.

(ii) Audiometric loss should not be greater than 20 db, in frequencies between 250 and 8000 Hz. On the recommendation of an ENT Specialist, an isolated unilateral hearing loss up to 30 db may be condoned provided ENT examination is otherwise normal.

(h) A radical/modified radical mastoidectomy entails rejection even if completely epithelialised and good hearing is preserved. Cases of cortical mastoidectomy in the past with the tympanic membrane intact, normal hearing and presenting no evidence of disease may be accepted.

(j) Cases of chronic otitis externa accompanied by exostoses or unduly narrow meatii will be rejected. Exaggerated tortuosity of the canal, obliterating the anterior view of the tympanic membrane will be a cause for rejection.

(k) Tympanoplasty Type I is acceptable twelve weeks after surgery, provided ear clearance test in altitude chamber is normal. The following middle ear conditions will entail rejection:-

(i) Attic, central or marginal perforation.

(ii) Tympanic membrane scar with marked retraction.

(iii) Tympanoplasty Type II onward but not Type I.

(iv) Calcareous plaques (tympanosclerosis) if occupying more than 1/3 of pars tensa.

(v) Middle ear infections.

(vi) Granulation or polyp in external auditory canal.

(vii) Stapedectomy operation.

(l) Miscellaneous Ear Conditions. The following ear conditions will entail rejection:-

(i) Otosclerosis.

(ii) Meniere‘s disease.

(iii) Vestibular dysfunction including nystagmus of vestibular origin.

(iv) Bell‘s palsy following ear infection.

22. Ophthalmic System

(a) Visual defects and medical ophthalmic conditions are amongst the major causes of rejection for flying duties.

(b) Personal and Family History and External Examination.

(i) Squint and the need for spectacles for other reasons are frequently hereditary and a family history may give valuable information on the degree of deterioration to be anticipated. Candidates, who are wearing spectacles or found to have defective vision, will be properly assessed.

(ii) Ptosis interfering with vision or visual field is a cause for rejection till surgical correction remains successful for a period of six months. Candidates with uncontrollable blepharitis, particularly with loss of eyelashes, are generally unsuitable and will be rejected. Severe cases of blepharitis and chronic conjunctivitis will be assessed as temporarily unfit until the response to treatment can be assessed.

(iii) Naso-lacrymal occlusion producing epiphora or a mucocele entails rejection, unless surgery produces relief lasting for a minimum of six months.

(iv) Uveitis (iritis, cyclitis, and choroiditis) is frequently recurrent, and candidates giving a history of or exhibiting this condition will be carefully assessed. When there is evidence of permanent lesions such candidates will be rejected.

(v) Corneal scars, opacities will be cause for rejection unless it does not interfere with vision. Such cases will be carefully assessed before acceptance, as many

conditions are recurrent.

(vi) Cases with Lenticular opacities will be assessed carefully. As a guideline any opacity causing visual deterioration, or is in the visual axis or is present in an area of 7 mm around the pupil, which may cause glare phenomena, will not be considered fit. The propensity of the opacities not
to increase in number or size will also be a consideration when deciding fitness.

(vii) Visual disturbances associated with headaches of a migrainous type are not a strictly ocular problem, and will be assessed accordingly. Presence of diplopia or detection of nystagmus requires proper examination, as they can be due to physiological reasons.

(viii) Night blindness is largely congenital but certain diseases of the eye exhibit night blindness as an early symptom and hence, proper investigations are necessary before final assessment. As tests for night blindness are not routinely performed, a certificate to this effect that the individual does not suffer from night blindness will be obtained in every case. Certificate will be as per Appendix- D to the draft rules.

(ix) Restriction of movements of the eyeball in any direction and undue depression/ prominence of the eyeball requires proper assessment.

(c) The visual acuity and colour vision requirements are detailed in Appendix- C to this rule. Those who do not meet these requirements will be rejected.

(d) If there is a strong family history of Myopia, particularly if it is established that the visual defect is recent, if physical growth is still expected, or if the fundus appearance is suggestive of progressive myopia, even if the visual acuity is within the limit prescribed, the candidate will be declared unfit.

(e) Refractive Surgeries. Candidates who have undergone PRK (Photo Refractive Keractectomy)/ LASIK (LASER In Situ Keratomileusis) may be considered fit for commissioning in the Air Force all branches.

(f) The following criteria must be satisfied prior to selecting post PRK/ LASIK candidates:-

(i) PRK/ LASIK surgery should not have been carried out before the age of 20 years.

(ii) The axial length of the eye should not be more than 25.5 mm as measured by IOL master.

(iii) Atleast 12 months should have elapsed post uncomplicated stable PRK/ LASIK with no history or evidence of any complication.

(iv) The post PRK/ LASIK corneal thickness as measured by a corneal pachymeter should not be less than 450 microns.

(v) Individuals with high refractive errors (>6D) prior to PRK/ LASIK are to be excluded.

(g) Radial keratotomy (RK) surgery for correction of refractive errors is not permitted for any Air Force duties. Candidates having undergone cataract surgery with or without IOL implants will also be declared unfit.

(h) Ocular Muscle Balance

(i) Individuals with manifest squint are not acceptable for commissioning.

(ii) The assessment of latent squint or heterophoria in the case of aircrew will be mainly based on the assessment of the fusion capacity. A strong fusion sense ensures the maintenance of binocular vision in the face of stress and fatigue. Hence, it is the main criterion for acceptability.

(aa) Convergence.

(aaa) Objective Convergence. Average is from 6.5 to 8 cm. It is poor at 10 cm and above.

(aab) Subjective Convergence (SC). This indicates the end point of binocular vision under the stress of convergence. If the subjective convergence is more than 10 cm beyond the limit of objective convergence, the fusion capacity is poor. This is specially so when the objective convergence is 10 cm and above.

(ab) Accommodation. In the case of myopes, accommodation should be assessed with corrective glasses in position. The acceptable values for accommodation in various age groups are given in table below:-

Age in Yrs	17-20	21-25	26-30	31-35	36-40	41-45
Accommodation (in cm)	10-11	11-12	12.5-13.5	14-16	16-18.5	18.5-27

(j) Ocular muscle balance is dynamic and varies with concentration, anxiety, fatigue, hypoxia, drugs and alcohol. The above tests will be considered together for the final assessment. For example, cases just beyond the maximum limits of the Maddox Rod test, but who show a good binocular response, a good objective

convergence with little difference from subjective convergence, and full and rapid recovery on the cover tests may be accepted. On the other hand, cases well within Maddox Rod test limits, but who show little or no fusion capacity, incomplete or no recovery on the cover tests, and poor subjective convergence will be rejected. Standards for assessment of Ocular Muscle Balance are mentioned in Appendix- C to the draft rules.

(k) Any clinical findings in the media (cornea, lens, vitreous) or fundus, which is of pathological nature and likely to progress will be a cause for rejection. This examination will be done by slit lamp and ophthalmoscopy under mydriasis.

23. Haemopoietic System

(a) All candidates will be examined for clinical evidence of pallor (anaemia), malnutrition, icterus, peripheral lymphadenopathy, purpura, petechiae/ ecchymoses and hepatosplenomegaly.

(b) In the event of laboratory confirmation of anaemia (<13g/dl in males), further evaluation to ascertain type of anaemia and aetiology will be carried out. This will include a complete haemogram (to include the PCV MCV, MCH, MCHC, TRBC, TWBC, DLC,

Platelet count, reticulocyte count and ESR) and a peripheral blood smear. All the other tests to establish the aetiology will be carried out, as required. Ultrasonography of abdomen for gallstones, upper GI Endoscopy/ proctoscopy and hemoglobin electrophoresis etc. will be done, as indicated, and the fitness of the candidate, decided on the merit of each case.

(c) Candidates with mild microcytic hypochromic (Iron deficiency anaemia) or dimorphic anaemia (Hb < 11.5g/dl in males), in the first instance, will be made temporarily unfit for a period of 04 to 06 weeks followed by review thereafter. These candidates can be accepted, if the complete haemogram and PCV, peripheral smear results are within the normal range. Candidates with macrocytic/ megaloblastic anaemia will be assessed unfit.

(d) All candidates with evidence of hereditary haemolytic anaemias (due to red cell membrane defect or due to red cell enzyme deficiencies) and haemoglobinopathies (Sickle cell disease, Beta Thalassaemia: Major, Intermedia, Minor, Trait and Alpha Thalassaemia etc.) will be considered unfit for service.

(e) In the presence of history of haemorrhage into the skin like ecchymosis / petechiae, epistaxis, bleeding from gums and alimentary tract, persistent bleeding after minor trauma or lacerations / tooth extraction and any family history of haemophilia or other bleeding disorders a full evaluation will be carried out. These

cases will not be acceptable for entry to service. All candidates with clinical evidence of purpura or evidence of thrombocytopenia will be considered unfit for service. Cases of purpura simplex (simple easy bruising), a benign disorder seen in otherwise healthy women may be accepted.

(f) Candidates with history of haemophilia, von Willebrand's disease, on evaluation, will be declared unfit for service at entry level.

24. Assessment for women candidates-

(a) Any lump in the breast will be a cause for rejection. Cases of Fibroadenoma breast after successful surgical removal may be considered fit with the opinion of a surgical specialist and a normal histopathological report.

(b) Galactorrhoea will be cause for temporary unfitness. Fitness after investigation/treatment may be considered based on merits of the case and opinion of the concerned specialist.

(c) Any abnormality of external genitalia will be considered on merits of each case. Significant hirsutism especially with male pattern of hair growth will be a cause for rejection.

Following conditions will not be a cause for rejection:-

(i) Small fibroid uterus (3 cm or less in diameter) without symptoms.
(ii) Small ovarian cyst (6 cm or less in diameter) as such cysts are invariably functional.
(iii) Congenital elongation of cervix (which comes up to introitus).

(d) Congenital uterine anomalies such as bicornuate uterus, uterus didelphys and arcuate uterus. Acute or chronic pelvic infection and Endometriosis will be causes for rejection.

(e) Severe menorrhagia will entail rejection.

(f) Complete prolapse of uterus will be a cause for rejection. Minor degree, after surgical correction, may be considered for fitness on merits.

(g) Any other gynaecological condition not covered above will be considered on merits of each case by gynecologist.

(h) Pregnancy will be a cause for rejection.

VISUAL STANDARDS FOR AIR FORCE COMMON ADMISSION ONLINE TEST FOR FLYING BRANCH AND GROUND DUTIES (TECHNICAL AND NON-TECHNICAL)/ NCC SPECIAL ENTRY/ METEOROLOGY ENTRY

CANDIDATES ON ENTRY

Sl No	Branch	Maximum Limits of Refractive Error	Visual Acuity Errors	Colour Vision
1	F(P) including WSOs	Hypermetropia: + 2.0D Sph Manifest Myopia: Nil Retinoscopic myopia: - 0.5 in any meridian permitted Astigmatism: + 0.75D Cyl (within + 2.0D Max)	6/6 in one eye and 6/9 in other, correctable to 6/6 only for Hypermetropia	CP-I
2	Aircrew other than F(P)	Hypermetropia: +3.5D Sph Myopia: -2.0D Sph Astigmatism: + 0.75D Cyl	6/24 in one eye and 6/36 in other, correctable to 6/6 and 6/9	CP-I
3	Adm/ Adm (ATC)/ Adm (FC)	Hypermetropia: + 3.5D Sph Myopia: -3.5D Sph Astigmatism: + 2.5D Cyl in any meridian	Corrected visual acuity should be 6/9 in each eye	CP-II
4	AE(M) AE(L)	Hypermetropia: + 3.5 D Sph Myopia: -3.50 D Sph Astigmatism: + 2.5D Cyl in any meridian	Corrected visual acuity should be 6/9 in each eye. Wearing of glasses will be compulsory when advised	CP-II
5	Met	Hypermetropia: + 3.5 D Sph Myopia: -3.50 D Sph Astigmatism: + 2.50 D Cyl	Corrected visual acuity should be 6/6 in the better eye and 6/18 in the worse eye. Wearing of Glasses will be compulsory.	CP-II
6	Accts/ Lgs/Edn	Hyermetropia: + 3.5 D Sph Myopia: -3.50 D Sph Astigmatism: + 2.50 D Cyl	Corrected visual acuity sho uld be 6/6 in the better eye and 6/18 in the worse eye. Wearing of Glasses will be compulsory.	CP-III

Notes:
Note1. Ocular muscle balance for personnel covered in Sl. Nos. 1 and 2 should conform to the table given below:-

<u>Standard of Ocular Muscle Balance for Flying Duties</u>

Sl No	Test	Fit	Temporary Unfit	Permanently Unfit
1	Maddox Rod Test at 6 meters	Exo- 6 Prism D Eso- 6 Prism D Hyper- 1 Prism D Hypo- 1 Prism D	Exo- Greater than 6 prism D Eso- Greater than 6 prism D Hyper- Greater than 1 prism D Hypo- Greater than 1 prism D	Uniocular suppression Hyper/Hypo more than 2 prism D
2	Maddox Rod Test at 33 cm	Exo-16 Prism D Eso- 6 Prism D Hyper- 1 Prism D Hypo- 1 Prism D	Exo- Greater than 16 prism D Eso- Greater than 6 prism D Hyper- Greater than 1 prism D Hypo- Greater than 1 prism D	Uniocular suppression Hyper/Hypo more than 2 prism D
3	Hand held Stereoscope	All of BSV grades	Poor Fusional reserves	Absence of SMP, fusion Stereopsis
4	Convergence	Up to 10 cm	Up to 15 cm with effort	Greater than 15 cm with effort
5	Cover Test for Distance and Near	Latent divergence /convergence recovery rapid and complete	Compensated heterophoria/ trophia likely to improve with treatment /persisting even after treatment	Compensated heterophoria

Note 2. The Sph correction factors mentioned above will be inclusive of the specified astigmatic correction factor. A minimum correction factor upto the specified visual acuity standard can be accepted.

Appendix D
[Refers to para 22 (b) (viii)]
Certificate Regarding Night Blindness

Name with Initials
____ Batch No.
__________________ Chest No _________________________

I hereby certify that to the best of my knowledge, there has not been any case of night blindness in our family, and I do not suffer from it.

Date: ……………………………….
(Signature of the candidate)

Countersigned by

(Name of Medical Officer)