

Medical Fitness Criteria for UPSC Engineering Services

(As per the UPSC Gazette)

After the declaration of final results of ESE examination, all the candidates who make it to the final list have to undergo medical fitness tests conducted by Railway Board at various Railway Hospitals. This medical examination is basically done to assess the suitability of the candidate for various services/departments opted by him/her. The final cadre allocation is done only after the recommendations sent by the medical board through the medical reports of the candidate.

Below mentioned is the list of medical tests carried out for every candidate and the criteria for each test which decides whether the candidate is fit or unfit for the selected services:

Height

All those candidates seeking appointment in

- Railway Engineering Service (Civil/Mechanical/Electrical and Signal)
- Central Engineering Services Group A
- Central Engineering Service (Roads)
- Central Electrical and Mechanical Engineering Service Group A in the CPWD Military Engineer Services
- Indian Defence Service of Engineer (IDSE)
- Central Water Engineering Service
- BRES Group A in Border Road Organisation
- Indian Skill Development Service (ISDS)

Height criteria for male candidates: **152cm**

Height criteria for female candidates: **150cm**

This is relaxable in case of scheduled tribes and races belonging to Gorkhas, Garhwalis etc.

Height measurements will be done twice before coming to final decision.

Chest Expansion

Chest girth fully expanded -

- For Male candidates : **84 cm**
- For Female candidates : **79 cm**

For all services minimum chest expansion should be **5cm**.

Candidate will be directed to take deep inspiration several times and then maximum expansion of the chest will be carefully noted. Fraction less than half of a centimetre will not be noted.

Chest expansion measurements will be done twice before coming to final decision.

Weight Measurement

- Candidates will be weighed and the weight will be recorded in kilograms. Fraction of kilogram will not be noted.
- Obesity: If a candidate has BMI > 35 then he/she is declared temporarily unfit and can become fit if they achieve BMI < 35 without any surgery or interventional therapies.

Eye Sight Test

Eye sight test results will be recorded based on two tests:

- **General Examination :** This will be done to detect any unhealthy conditions of eye, eyelids or contiguous structure which can render the candidate unfit in future.
- **Visual Acuity :** Under this there will be two tests, one for *Distant Vision* and other for *Near Vision*. The standards for distant vision and near vision with or without glasses are as follows:

Service	Distant Vision		Near Vision	
	Better Eye (Corrected Vision)	Worse Eye	Better Eye (Corrected Vision)	Worse Eye
A. For Technical Services				
<ul style="list-style-type: none"> • Railway Engineering Service (Civil/Mech./Electrical and Signal) 	*6/6 or *6/9	*6/12 or *6/9	*J/I	*J/II
<ul style="list-style-type: none"> • Central Engineering Services Group A • Central Electrical and Mechanical Engineering Service Group A • Central Water Engineering Service Group A • Central Power Engineering Service (Gr A and Gr B) • Central Engineering Service (Roads) Group A • Indian Radio Regulatory Service Group A • Indian Telecommunication Service Group A • Junior Telecom Officer (General Central Service Gr. B Gazetted) • Assistant Executive Engineer in P&T Building Works Gr. A Service • Indian Naval Armament Service • Indian Naval Stores Service • Indian Ordnance Factory Service Group A • Survey of India, Group A service • Defence Aeronautical Quality Assurance Service (DAQAS) • Indian Skill Development Service (ISDS) 	*6/6 or *6/9	*6/12 or *6/9	*J/I	*J/II
<ul style="list-style-type: none"> • Indian Defence Service of Engineer (IDSE) • Assistant Executive Engineer (QS & C) in Military Engineer Service (MES) Cadre • BRES Group A in Border Road Organisation • Assistant Executive Engineer (Group A) in the Corps of EME Military Engineer Service Group A 	*6/6 or *6/9	*6/18 or *6/9	*J/I	*J/II
For technical services: <ul style="list-style-type: none"> • The total amount of Myopia (including cylindrical and spherical) shall not exceed 6D. • The total amount of Hypermetropia (including the cylinder) shall not exceed 4D. <p>If in case candidate has myopia and hypermetropia more than the above mentioned limits then candidate is unfit for the technical services. And, such candidates will be forwarded to special medical board for consideration if they are fit for non technical services.</p>				
B. For Non- Technical Services				
<ul style="list-style-type: none"> • Geological Survey of India Group A Service • Indian Railway Store Services , Group A 	*6/9	*6/12	*J/I	*J/II

*6/6 - where one can read a certain line of letters from a distance of six feet.

6/9 - vision can only read a line at six feet that a normal individual could read at nine feet.

6/12 - vision can only read a line at six feet that a normal individual could read at twelve feet.

To evaluate near vision, the eye doctor may use a small hand-held card called a Jaeger eye chart. A Jaeger eye chart contains several blocks of successively smaller text, generally ranging in size from J10 (large print) to J1 (very small print). The type scale on a modern Jaeger eye chart usually ranges from J10 (approximately 14-point type for Times New Roman font) to J1 (approximately 3-point type, Times New Roman).

- NOTE:**
1. In case a candidate has higher myopia then it will be referred to three Ophthalmologists to examine whether it is Pathological Myopia or not. In every case of Myopia Fundus examination will be carried out to ensure the condition is not progressive and will not affect the efficiency of the candidate in future.
 2. Candidates with Intra Ocular lens i.e. the lens that is implanted in eye as a treatment of myopia and Implanted Contact Lenses (ICL) will be disqualified from all the services.
 3. In cases of **Radial Keratotomy/Laser Correction (Lasik)** may be permitted subjected to examination by Special Ophthalmic Board, if and only if the bed of the cornea is not less than 425 micron (including flap) on Pachymetry.
 - The surgery should be atleast 1 year old.
 - During the medical test candidate is not allowed to wear contact lenses.

Colour Blindness

This is done by response of recognition (without hesitation) of Red, Green and Yellow colours. This is done by Ishihara's plates shown in good light and by Edridge Green's Lantern.

Colour perception can be classified in two categories depending on the size of aperture and exposure time:

- Higher grade of colour perception
- Lower grade of colour perception

Grade	Higher grade of colour perception	Lower grade of colour perception
Distance between the lamp and the candidate	16 feet	16 feet
Size of aperture	3 mm	13 mm
Time of Exposure	5 second	5 second

Technical Services or posts requiring Higher Grade Colour Perception :

- Railway Engineering Service (Civil/Mechanical/Electrical and Signal)
- Indian Defence Service of Engineer (IDSE)
- Central Engineering Service (Roads)
- Central Power Engineering Service (Gr A and Gr B)
- Assistant Executive Engineer (Group A) in the Corps of EME
- BRES Group A in Border Road Organisation
- Survey of India, Group A Service
- Assistant Executive Engineer (QS & C) in Military Engineer Service (MES) Cadre

Technical Services or posts requiring Lower Grade Colour Perception :

- Central Engineering Services Group A
- Central Electrical and Mechanical Engineering Service
- Indian Naval Armament Service
- Indian Naval Stores Service
- Indian Ordnance Factory Service
- Central Water Engineering Service
- Indian Radio Regulatory Service Group A
- Geological Survey of India Group A Service
- Assistant Executive Engineer in P&T Building Works Group A Service
- Defence Aeronautical Quality Assurance Service (DAQAS)
- Indian Skill Development Service (ISDS)

Services for which Colour Perception is NOT required :

- Indian Telecommunication Service Group A
- Junior Telecom Officer (General Central Service Group B Gazetted, Non Ministerial)
- Indian Railway Store Service, Group A

Note : During the medical test candidate is not allowed to wear contact lenses.

Field of Vision

Confrontation test will be used to test the field of vision i.e. the area a candidate can see when eyes are fixed in one position.

In the confrontation test the candidate must cover one eye with hand and read the text shown by the examiner.

- For moving test, usually examiner starts from outside with 180 degree visual field and slowly positioning it to centre.
- For stationary test, examiner holds up a certain number of fingers and asks the candidate the correct number.

Night Blindness

Night blindness is not tested as a routine but only in special cases medical board will be given discretion to carry rough test. In this test candidate's visual acuity is recorded in reduced illumination or candidate is asked to recognise objects in darkened room after he/she has been there for 20-30 minutes.

- For Central Engineering Services (Roads) candidates may be required to pass night blindness test in addition to colour blindness test.
- For Survey of India Group A services candidate may be required to pass 'Stereoscopic Fusion Test' also.

'Stereo'- meaning solid and 'opsis' meaning appearance is a term that is most often used to refer to the perception of depth and 3-dimensional structure obtained on the basis of visual information deriving from two eyes by individuals with normally developed binocular vision.

Note : During the medical test candidate is not allowed to wear contact lenses.

Hearing Disorder

Marked or total deafness in one ear, other being normal	If the deafness is up to 30 decibels in higher frequency - Fit for non technical jobs
Perceptive deafness in both ears in which some improvement is possible by a hearing aid	If deafness is up to 30 decibels in speech frequencies of 1000-4000, Fit in respect of both technical and non-technical jobs
Perforation of tympanic membrane of central or marginal type	<p>(i) One ear normal; other ear perforation of tympanic membrane* present-temporarily unfit. Under improved conditions of ear surgery a candidate with marginal or other perforation in both ears should be given a chance by declaring him temporarily unfit.</p> <p>*<i>Tympanic Membrane</i> is commonly known as ear drum.</p> <p>(ii) Since all marginal/attic*perforations are unsafe, they are temporarily unfit whether present in one or both ears. Post surgery if candidate is able to hear 30 decibels or better then he will be considered.</p> <p>*<i>Marginal Perforation</i> means perforation occurring at the margin of ear drum. <i>Attic Perforation</i> means perforation occurring on the superior part of the ear drum</p> <p>(iii) Central Perforation both ears – Temporarily Unfit</p>
Ears with mastoid cavity sub-normal hearing on one or both sides	<p>(i) Either ear normal hearing, other ear with mastoid cavity -fit for both technical and non-technical jobs.</p> <p>(ii) Mastoid cavity both sides-</p> <ul style="list-style-type: none"> Unfit for technical jobs. Fit for non-technical jobs if hearing improves to 30 decibels in either ear with or without hearing aid.
Persistently discharging ear-operated/unoperated	Temporarily unfit for both technical and non-technical jobs.
Chronic inflammatory/allergic conditions of nose with or without bony deformities of nasal septum	<p>Decision will be taken depending on the individual case. If deviated nasal septum* is present then candidate will be temporarily unfit.</p> <p>*<i>Deviated Nasal Septum</i> - the bone and cartilage that divide the nasal cavity of the nose in half - is significantly off center, or crooked, making breathing difficult.</p>
Chronic inflammatory conditions of tonsils and /or larynx	<p>(i) Chronic inflammatory conditions of tonsils and/or larynx. -Fit.</p> <p>(ii) Hoarseness of voice of severe degree if present - temporarily unfit</p>
Benign or locally malignant tumours of the ear, nose, or throat	<p>(i) Benign tumours- temporarily unfit can be fit after successful surgery/treatment</p> <p>(ii) Malignant Tumours – Unfit</p>
<p>*Otosclerosis</p> <p>*<i>Otosclerosis</i> is the abnormal growth of bone in ears which leads to hearing loss.</p>	If the hearing is within 30 decibels after the operation or with the help of hearing aid-Fit .
Congenital defects of ear, nose, or throat	<p>(i) If not associated with functions-Fit</p> <p>(ii) Stuttering* of severe degree-Unfit</p> <p>*<i>Stuttering</i> is also known as stammering is a speech disorder where involuntary repetitions of words/sounds take place.</p>
Nasal Polyp	Nasal Polyps are temporarily unfit and can be made fit after successful completion of treatment/surgery.

Blood Pressure

Blood pressure is measured by the mercury manometer type of instrument and the range is set by Rough Method for calculating the blood pressure:

- (i) With young candidates 15-25 years of age – the average is about 100 plus the age
- (ii) With candidates over 25 years – 110 plus half the age is satisfactory.

If the systolic pressure is over 140mm and diastolic above 90mm then it is regarded with suspicion and then the candidate is required to undergo further tests to examine whether the increase is due to transient nature like excitement, nervousness etc. or whether there is a medical condition responsible for the same.

- Candidates diagnosed with hypertension are unfit for any of the services.

Diabetes Mellitus

The urine test should test negative to sugar, but if in case medical board finds sugar then the case will be proceed for further examination. If standards of medical fitness are met then they pass candidate as fit.

- If it is the case of Glycosuria then after further examinations and tests medical board will come to their conclusion. Candidate having Diabetes Mellitus is declared unfit.

Apart from all the points mentioned above candidate should fulfil below mentioned criteria as well :

- I. Candidate's speech should be without impediment.
- II. Candidate's teeth should be in good order and he/she is provided with dentures wherever necessary.
- III. There should be no evidence of abdominal disease.
- IV. If a candidate is suffering from hydrocele, varicose veins, piles etc. then candidates is declared temporarily unfit and will be considered fit after treatment/surgery. If candidate is suffering from Grade – I haemorrhoids is declared fit.
- V. If limbs, hands, feet are well formed or the condition is not degenerative and has motion of all limbs required to do service efficiently then he/she is considered fit for the service.
- VI. Candidate should not suffer from congenital malformation or defect.
- VII. Candidate should not suffer from any inveterate skin disease.
- VIII. Candidate should not have traces of chronic disease.
- IX. Candidate should be free from communicable diseases.
- X. Agenesis or absence of both testes is permanent unfit. Undescended testes are temporarily unfit till after its surgical removal or repositioning in a visible/normal position. Agenesis may be declared fit but the onus of proof that it is a case of agenesis and not undescended testes lies with the candidate.
- XI. If candidate has transplanted organs then he/she is unfit for the services.
- XII. If a candidate has history of organ donation then he/she is fit if the candidate is in normal state of health.
- XIII. Any malignancies detected, then candidate is declared unfit.

Appeal against the Decision of the Medical Board

Candidates can file an appeal against the decision of the Medical Board within 7 working days from the date of communication on which medical board conveyed medical results to the candidate through mail, by depositing an appeal fee of Rs. 100 as prescribed by Government of India, Ministry of Railways in this behalf.

Along with the appeal the candidates must submit a medical certificate by registered doctor specifically mentioning that he is aware of candidate having been declared unfit by medical board.

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