

Medical Examination Standards
For

Vocational Driver's Licensing



Occupational Health Unit
Disease Control Division
Ministry of Health



Medical Examination Standards For Vocational Driver's Licensing
ISBN: 978-98-3433-89-6

© 2011, Occupational Health Unit, Disease Control Division, MOH Malaysia

All right reserved. No part of this publications may be produced or distributed in any form or any means, or stored in a database or retrieval system, without prior writer permission of other author.

Produced by:
Occupational Health Unit,
Diseases Control Division,
Ministry of Health, Malaysia,
Parcel E, Block E10, Level 6,
Federal Government Administration Centre,
62590, Putrajaya.

Preface	4
Participant of Medical Examination Standards For Vocational Driver's Licensing Technical Committee Expert Committee	5 7
Medical Examination Standard	10
Guidelines for Medical Examination of Vocational Drivers	25
Medical Examination Format Process	26
Process Flow	29
References	31

Preface



Dato' Dr. Hasan bin Abdul Rahman
Director General of Health, Malaysia


I would like to take this opportunity to commend the Occupational Health Unit, Disease Control Division, Ministry of Health, Malaysia, for developing these much needed standards. Medical examination for the assessment of fitness of vocational drivers is a very important process in the application of a vocational license. Medical conditions may have a potential impact on the driving ability of a person and if not addressed, this may prove dangerous to the public.

Driving a motor vehicle is a complex task involving perception, appropriated judgement, adequate response time and reasonable physical capabilities. A range of medical conditions may impair one's driving ability resulting in a crash causing injury or death.

Medical standards are required to assess certain conditions that may impair driving ability. Stringent standards are required for drivers of commercial vehicles due to the potential detrimental threat to body and life.

These standards have been developed by an expert committee that has studied the needs and requirements of vocational drivers while also taking into consideration existing standards in many other countries.

The Ministry of Health is committed to ensuring that the health and safety of the public is maintained and thus the need for adherence to compulsory standard



Dato' Dr. Hasan bin Abdul Rahman
Director General of Health, Malaysia

PARTICIPANTS OF MEDICAL EXAMINATION STANDARDS FOR VOCATIONAL DRIVER'S LICENSING COMMITTEE

ADVISORY	
Dato' Dr. Hasan bin Abdul Rahman	Deputy Director General of Health (Public Health) Ministry of Health, Malaysia
VICE CHAIRPERSON	
Dr. Balachandran Satiamurti	Deputy Director, Disease Control Division Non Communicable Disease Section Disease Control Division Ministry of Health, Malaysia
VICE CHAIRPERSON	
Dr. Sirajuddin bin Hashim	Senior Principal Assistant Director Occupational Health Unit, Disease Control Division Ministry of Health, Malaysia
VICE CHAIRPERSON	
Dr. Priya Ragunath	Senior Principal Assistant Director Occupational Health Unit, Disease Control Division Ministry of Health, Malaysia

TECHNICAL COMMITTEE

TECHNICAL COMMITTEE	
Dr. Mohd Khairi bin Yaacob	Director, Medical Practices Division Ministry of Health, Malaysia
Dr. Mohd Anis bin Harun	Principal Assistant Director, Medical Practices Division Ministry of Health, Malaysia
Dr. Alias bin Abdul Aziz	Assistant Director, International Health Unit Disease Control Division Ministry of Health, Malaysia
Dr. Hanizah binti Mohd Yusoff	Occupational Health Unit, Disease Control Division Ministry of Health, Malaysia
Dr. Zairin binti Abd Rahman	Senior Assistant Director, Occupational Health Unit Disease Control Division Ministry of Health, Malaysia
Dr. Anita binti Abd Rahman	Senior Assistant Director, Occupational Health Unit Disease Control Division Ministry of Health, Malaysia
En. Azmi bin Awang	Road Transport Department, Malaysia
En. Zulhasmi bin Mohamad	Road Transport Department, Malaysia

TECHNICAL COMMITTEE	
Dr.Norlen Mohamad	Research Officer Malaysian Institute of Road Safety Research
Dr. Muhammad FadhliMohdYusoff	Research Officer Malaysian Institute of Road Safety Research
Dr.NoridahbintiMohdSalleh	Principal Assistant Director Family Health Development Division Ministry of Health, Malaysia
Dr.Fauziabinti Zainal Ehsan	Principal Assistant Director Family Health Development Division Ministry of Health, Malaysia
Dato' Dr KhooKah Lin	President, Malaysian Medical Association
Dr.Jagdev Singh	Chairman, Society of Occupational and Environmental Medicine Malaysian Medical Association
Dato' Dr Teoh Shing Chin	Malaysian Medical Association
Dr. S. R. Manalan	Malaysian Medical Association
Dr.Nirmal Singh	Malaysian Medical Association
Dato' Dr. NKS Tharmaseelan	Malaysian Medical Association
Dr. Molly Cheah Bee Li	President Primary Care Doctors' Organization, Malaysia
Dr.Tengku Mohamed bin Tengku A. Jalil	Primary Care Doctors' Organization, Malaysia
Dr. Nik Khairol Reza Bin MohdYasin	Senior Principal Assistant Director, Occupational Health Unit Disease Control Division Ministry of Health, Malaysia
Dr. Pravin a/l Muniandy	Principal Assistant Director, Occupational Health Unit Disease Control Division Ministry of Health, Malaysia
Dr. N. Ganabaskaran	President (2019) Malaysian Medical Association
Dr.ThirunavukarasuRajoo	Malaysian Medical Association
Dr. L. Sivanesan	Malaysian Medical Association
Dr.SharfudinNordin	Public Health Physician Selangor State Health Department
Dr.MohdFaid Abdul Rashid	Public Health Physician Negeri Sembilan State Health Department
Dr. Lim Jac Fang	Public Health Physician Sabah State Health Department

EXPERT COMMITTEE

NEUROLOGY REQUIREMENTS	
Dato' Dr.Hanip bin Rafia	Senior Consultant and Head Department of Neurology Hospital Kuala Lumpur
Dr.Mohd. Safari bin MohdHaspani	Senior Consultant Department of Neurosurgery Hospital Kuala Lumpur
Dr. Johan Siregar bin Adnan	Senior Neurosurgery Consultant, Hospital Sultanah Aminah, Johor Bharu
Prof. Raymond Ali Zaman	Senior Neurology Consultant Hospital Universiti Kebangsaan Malaysia
Prof.Dr. Jafri Malin bin Abdullah	Senior Physician, Department of Neurosurgery, Hospital Universiti Sains Malaysia
Dr.Azmi Abd Rashid	Senior Consultant, Malaysia Society of Epilepsy, Damansara Specialist Centre
Prof.Dr. Goh Khean Jin	Senior Consultant, Malaysian Society of Neuroscience, University Malaya
Dr.Santhi a/p Datuk Puvanarajah	Senior Neurology Consultant Hospital Kuala Lumpur
Dr Sapiah Sapuan	Senior Neurology Consultant Hospital Sungai Buloh
Dr.Mohd Sufian Adenan	Senior Neurology Consultant Hospital Kuala Lumpur

ORTHOPAEDIC REQUIREMENTS	
Prof.Dato' Dr.Tunku Sara binti Tunku Ahmad	Consultant Orthopaedician and President Malaysia Society of Orthopedic Department of Orthopaedic Surgery University Malaya
Dr. Se To Boon Chong	Head of Department of Orthopaedics Hospital Pulau Pinang
Dr.Zulkiflee bin Osman	Head of Department of Orthopaedics Hospital Kuala Lumpur
Dr.Ramli bin Baba	Head of Department of Orthopaedics Hospital Selayang
Dato' Sri Dr Premchandran a/l P.S. Menon	Senior Orthopaedic Consultant and Head of Department of Orthopaedics Hospital Tuanku Ampuan Afzan, Kuantan
Datuk Dr. N. Sivapathasundarama/l Nadarajah	Head of Department of Orthopaedics Hospital Melaka

NEPHROLOGY REQUIREMENTS	
Dato' Dr.Zaki Morad bin Mohamad Zaher	Senior Consultant, Department of Nephrology Hospital Kuala Lumpur
Dr.Ravindran a/l Visvanathan	Consultant Nephrologist Hospital Kuala Lumpur
Dr. Tan Chwee Choon	Consultant Nephrologist President, Malaysian Society of Nephrology Hospital Tuanku Ampuan Rahimah, Klang
Dato' Dr. Ong Loke Meng	Senior Consultant Nephrologist Hospital Pulau Pinang

RESPIRATORY REQUIREMENTS	
Dato' Dr.Jeyaindran Tan Sri Sinnadurai	Head of Department of Medicine Hospital Kuala Lumpur
DatinDr.AziahAhamadMahayiddin	Head Institute of Respiratory Medicine Jalan Pahang, Kuala Lumpur
Prof. Liam Chong-Kin	Senior Consultant President, Malaysian Thoracic Society University Malaya Medical Centre
Dr. Christopher Lee Kwok Choong	Head Department of Medicine Hospital Kuala Lumpur
Dr. George Kutty Simon	Senior Consultant Respiratory Physician AIMST University
Dr JamalulAzizi bin Abdul Rahman	Senior Consultant Respiratory Physician Hospital Serdang

OTORHINOLARYNGOLOGY REQUIREMENTS	
Dr.Abd Majid bin Md. Nasir	Head Department of Otorhinolaryngology Hospital Kuala Lumpur
Dr.SitiSabzahbintiMohdHusni	Head Department of Otorhinolaryngology Hospital AlorSetar
Dr.Faridah Hassan	Head Department of Otorhinolaryngology Hospital Selayang
Dr ZulkifleeSalahuddin	Head Department of Otorhinolaryngology Hospital Raja Perempuan Zainab II, Kelantan

VISUAL REQUIREMENTS	
Dr. Goh Pik Pin	Consultant Ophthalmologist Hospital Selayang
Dr. Mariam binti Ismail	Consultant Ophthalmologist Hospital Selayang
Dr.Fang Seng Kheong	Consultant Ophthalmologist Hospital Mata TunHusin Onn
Dr. Wong Jun Shyan	Consultant Ophthalmologist MMA
Dr.MimiwatiZahari	Consultant Ophthalmologist University Malaya Medical Centre
Dr.Mohd Aziz bin Husni	Consultant Ophthalmologist Hospital Selayang
Dr. Nor FarizaNgah	Consultant Ophthalmologist Hospital Shah Alam

OPTOMETRIST RERQUIREMENTS	
Dr.Rokiah Omar	Optometrist Hospital Kuala Lumpur
PuanCheRuhaniCheJaafar	Optometrist Hospital Kuala Lumpur
PuanHanizahHjSuboh	Optometrist Hospital Kuala Lumpur
PuanSyuhairahHamzah	Optometrist Hospital Kuala Lumpur
En. Ismail Shukor	Secretary Malaysian Optical Council

PSYCHIATRIC DISORDERS, ALCOHOL AND DRUG ABUSE	
Dato' Dr.Suarn Singh	Senior Consultant and Director Hospital Bahagia, Perak
Dr.Fauziah Mohammed	Head Department of Psychiatry Hospital Tengku Ampuan Rahimah, Klang
Dato' Dr.Hj Abdul Aziz	Senior Consultant, Department of Psychiatry Hospital Kuala Lumpur
Dr. Benjamin Chan Teck Ming	Head Department of Psychiatry Hospital Permai Johor Bharu
Prof.Dr. Abdul Hamid bin Abdul Rahman	Head Department of Psychiatry Hospital Universiti Kebangsaan Malaysia
Dr.Rajinder Singh	Head Department of Psychiatry Hospital Ipoh
Prof.Dr.Maniam Thambu	Consultant Psychiatrist and President Malaysian Psychiatry Association
Dr.Toh Chin Lee	Consultant Psychiatrist Hospital Selayang
Dr. Ng Cha Nee	Consultant Psychiatrist Hospital Selayang

CARDIOVASCULAR AND HYPERTENSION	
Dato' Dr. Omar bin Ismail	Consultant and Head Department of Cardiology Hospital Pulau Pinang
Dato' Dr.Azahari Rosman	Consultant Cardiologist and President Presiden Malaysian Society of Hypertension
Dr.Ngau Yen Yen	Consultant Physician Hospital Kuala Lumpur
Dr.Mohd Ariff Fadzli	Director Faculty of Medicine Universiti Teknologi MARA
Dato' Dr.Abd. Kahar Ghapar	Consultant Cardiologist Hospital Serdang

DIABETES MELLITUS AND OTHER ENDOCRINE DISEASES	
Prof.Dr.Ikram Shah bin Ismail	Consultant Physician and President Malaysian Diabetes Association
Dr. K. Sree Raman	Consultant Physician Hospital Seremban
Dr.Zanariah binti Hussin	Consultant Endocrinologist Hospital Putrajaya
Dr. G. R. Letchuman	Consultant Physician Hospital Ipoh

PATHOLOGY REQUIREMENTS	
Dr. Muhammad Arif bin Mohd. Hashim	Head Department of Pathology Hospital Kuala Lumpur
Encik Kamarulzaman	Medical Assistant Patology Laboratory Hospital Kuala Lumpur

REHABILITATION REQUIREMENTS	
Dr.Yusnizabinti Mohd .Yusoff	Senior Consultant of Rehabilitation Medicine Hospital Rehabilitation Cheras

MEDICAL EXAMINATION STANDARDS

This medical examination standards are to be used to determine the fitness level of the applicants. Any applicant not fulfilling the criteria stated will be considered as unfit to apply for a vocational driving license.

CHAPTER 1: VISUAL DISORDERS

CONDITION	MEDICAL STANDARDS
<p>1.1 VISUAL IMPAIRMENT</p>	<p>License may be granted if visual acuity is of at least 6/12 in each eye (i.e. each eye must have at least 6/12, 6/9, 6/6 or better, tested separately) with or without corrective aids such as glasses or contact lenses.</p> <p>Test required : Visual acuity test done at 6 meters, using standard Snellen's Chart either number, alphabet, or illiterate E Chart or chart with logarithmic progression, such as in the ETDRS standards, at the distance appropriate for the chart. Test one eye at a time. A person who makes more than two errors on the line with five characters should be regarded as having failed that line. Drivers who require corrective lens to achieve maximum visual acuity should be required to wear their corrective lenses while driving. Charts designed to be used at 3m or greater are recommended.</p>
<p>1.2 VISUAL FIELD DEFECTS</p> <p>(Disorders such as Severe Bilateral Glaucoma, Severe Bilateral Retinopathy, Retinitis Pigmentosa and other disorders producing field defects including partial or complete homonymous hemianopia, quadrantanopia or complete bitemporal hemianopia)</p>	<p>License may be granted if the binocular visual field has an extent of at least 120° along the horizontal meridian</p> <p>Test required : Visual fields is done with both eyes open and may be initially screened by Confrontation test. Any person who has or is suspected of having a visual field defect should be referred for expert assessment by an Optometrist or an Ophthalmologist for an objective test using an automated perimetry with Goldmann Standard testing conditions such as Humphrey, Octopus, Kowa Automated Visual Field Analyzer and others. Use the Esterman function Test and test with both eyes open.</p>
<p>1.3 DIPLOPIA</p> <p>(Double vision)</p>	<p>Not qualified for licensing if diplopia is present within the central 40° primary gaze (i.e. 20° to the right, left, above and below fixation, even if the diplopia is correctable with a prism).</p>

CONDITION	MEDICAL STANDARDS
1.4 COLOUR VISION DEFECT	<p>Not qualified for licensing if severe protanopia (severe red defect) is present: Those who fail to recognize correctly 4 plates of the Ishihara Test for Colour Deficiency (38 plates) should be referred to the specialist for further evaluation of colour vision. Confirmatory tests for colour vision include Farnsworth-Munsell Dichotomous D-15 Test, SPP pseudoisochromatic Part 1 & Part 2 and Farnsworth-Munsell 100 Hues Test.</p>
1.5 NIGHT BLINDNESS	<p>Not qualified for licensing if night blindness is present. Currently there are no standard tests or procedures that can be recommended for assessing night blindness. Condition is elicited from history.</p>

CHAPTER 2: OTORINOLARYNGOLOGY DISORDERS

CONDITION	MEDICAL STANDARDS
2.1 HEARING LOSS	<p>Compliance with the standards should be clinically assessed initially and possible hearing loss measured by audiological testing that is performed by certified personnel and using certified facilities.</p> <p>Note :</p> <ul style="list-style-type: none"> -“Certified personnel” are Audiologist’s and certified Audiometricians -“Certified facilities” are facilities that are certified by DOSH or any licensing body <p>Not qualified for licensing If the person has an unaided average hearing threshold level of equal to or greater than 60dB in the better ear.</p> <p>(Average hearing threshold is the simple average of pure tone air conduction thresholds at 500, 1000, 2000 and 3000Hz).</p> <p>License may be granted, taking into account the opinion and endorsement of an ORL specialist and the nature of the driving task, and subject to periodic review if the standard is met with a hearing aid.</p> <p>Further assessment of the person may be arranged with the RTD authority and advice may be sought regarding modifications to the vehicle to provide a visual display of safety critical operations.</p>

CONDITION	MEDICAL STANDARDS
2.2 VESTIBULAR DISORDERS	<p>Note : Vestibular vertigo is vertigo caused by disturbances of vestibular system.</p> <p>License may be granted, taking into account the opinion and endorsement of an ORL specialist, Physician and the nature of the driving task, and subject to periodic review:</p> <p>For persons who have had vertigo caused by Meniere's disease or recurring unheralded attacks of vertigo or are free of vertigo for at least 12 months;</p> <ul style="list-style-type: none"> • For persons who have had one episode of vertigo caused by Acute Labyrinthitis (deafness and vertigo), Acute Neurolabyrinthitis (Vestibular Neuronitis), or any other type of vertigo or are free of vertigo for at least 6 months; • For persons who have had Benign Paroxysmal Positional Vertigo (BPPV) only, free of symptoms and signs of BPPV for at least 6 months. <p>The ORL specialist's opinion to be sought on :</p> <ul style="list-style-type: none"> • The nature of the condition and response to treatment; and • The functional ability to operate the vehicle safely

CHAPTER 3. NEUROLOGICAL DISORDERS

CONDITION	MEDICAL STANDARDS
3.1 EPILEPSY	Free of epileptic attacks (including nocturnal attacks) for at least 10 years without medication.
3.2 FIRST EPILEPTIC SEIZURE/SOLITARY FIT	<p>License may be granted after taking specialist's opinion, size and condition of duties to be performed and hours of worked (with conditions including limited and/or restricted use) :</p> <ul style="list-style-type: none"> • Person has had a single provoked seizure event; and • Provocative factors can be avoided reliably; and • Seizure free for 1 year; and • Does not take anti-epileptic medication; and • EG shows no epileptiform activity
3.3 LOSS OF CONSCIOUSNESS (LOC) DUE TO SIMPLE FAINT LOSS OF CONSCIOUSNESS DUE TO UNEXPLAINED SYNCOPE AND LOW RISK OF RECURRENCE	<p>Needs opinion from a physician whether the condition will cause LOC or loss of ability to control a vehicle.</p> <p>Suggested 6 months waiting period lapse from the time of the episode and complete neurological examination.</p>

CONDITION	MEDICAL STANDARDS
<p>3.4 LOSS OF CONSCIOUSNESS DUE TO UNEXPLAINED SYNCOPE AND HIGH RISK OF RECURRENCE:</p> <p>Abnormal ECG</p> <p>Structural heart disease</p> <p>Syncope cause injury</p> <p>More than 1 episode in previous 6 months</p> <p>Neurocutaneous sign</p> <p>Abnormal cardiac findings</p> <p>Known medical Conditions</p>	<p>License may be granted if the result is negative and no medication is required to control the condition.</p> <p>Certification should be deferred for at least 6 months until the driver has fully recovered from that condition and has no existing residual complications and not taking medication to control the condition.</p> <p>Note: Certification should be done by a physician.</p>
<p>3.5 CHRONIC NEUROLOGICAL DISORDERS (e.g. Parkinson's disease)</p>	<p>License may be granted after taking into account :</p> <ul style="list-style-type: none"> • Response to treatment • Annual driver tester report • Modification to the vehicle if necessary by Rehabilitation Physician or Occupational Therapist
<p>3.6 LIABILITY TO SUDDEN ATTACKS OF DISABLING GIDDINESS AND FAINTING</p>	<p>If condition is sudden and disabling, not qualified for licensing.</p> <p>If symptom free and controlled for at least one year, may be considered.</p>
<p>3.7 CEREBROVASCULAR DISEASES (including Stroke due to Vascular diseases, Intra Cranial Haemorrhage and Transient Ischemic Attack)</p>	<p>License may be granted and certified by a Physician or Rehabilitation Physician, if satisfactory functional recovery is attained within a period of 6 months from the date of the event.</p>
<p>3.8 CENTRAL NERVOUS SYSTEM INFECTIONS</p>	<p>1) During acute illness, must stop driving :</p> <ul style="list-style-type: none"> * For meningitis - 5 years without medication * For encephalitis - 10 years without medication <p>2) If seizure occurs during or after convalescence - must stop driving.</p> <p>License may be granted if 10 years free of attack without medication and do not cause danger whilst driving. Also depends on the residual physical disability as assessed by a Physician or Neurosurgeon.</p>

CONDITION	MEDICAL STANDARDS
3.9 SPINAL CORD INJURIES PERIPHERAL NERVE INJURIES	<p>License may be granted following:</p> <ol style="list-style-type: none"> 1) A consultation with orthopaedic Surgeon/ Rehabilitation Physician and an assessment by Occupational Therapist 2) Able to drive a non – modified automatic vehicle
3.10 NERVOUS SYSTEM TUMOUR	<p>Not qualified for licensing until cleared by relevant Specialist.</p>
3.11 SERIOUS CRANIOSPINAL INJURIES (Operated Intracerebral Hematoma or Compound Depressed Fracture or Dural Tear with more than 24 hours Post-Traumatic Amnesia)	<p>Not qualified for licensing until cleared by relevant Specialist.</p>
3.12 NON TRAUMATIC CRANIOSPINAL HAEMORRHAGE (e.g. Subarachnoid Haemorrhage)	<p>Not qualified for licensing until cleared by relevant Specialist.</p>
3.13 HYDROCEPHALUS	<p>License may be granted if uncomplicated and has no associated neurological deficit.</p>
3.14 COMPLICATED MIGRAINE	<p>Not qualified for licensing until cleared by relevant Specialist.</p>
3.15 CEREBRAL PALSY	<p>Not qualified for licensing unless cleared by relevant Specialist.</p>
3.16 INVOLUNTARYMOVEMENT	<p>Not qualified for licensing unless cleared by relevant Specialist</p>

CHAPTER 4. MUSCULOSKELETAL DISORDERS

CONDITION	MEDICAL STANDARDS
4.1 MUSCULOSKELETAL DISORDERS	<p>Not qualified for licensing :</p> <ol style="list-style-type: none"> 1) If rotation of the cervical spine is clinically restricted to less than 45 degrees to the left and right. 2) If chronic pain and restriction of the peripheral joint movement interfere with relevant movements or concentration such that the vehicle cannot be operated safely. 3) If there is ankylosis or chronic loss of joint movements of sufficient severity that control of vehicle is not safe. 4) Severe cervical myelopathy and quadriplegia.
4.2 ABSENCE OF UPPER LIMB OR LOSS OF UPPER LIMB FUNCTION	<p>Not qualified for licensing</p>
4.3 ABSENCE OF LOWER LIMB OR LOSS OF LOWER LIMB FUNCTION	<p>Only applied to car drivers,</p> <p>Licensing may be granted following:</p> <ol style="list-style-type: none"> 1) A consultation with orthopaedic Surgeon/ Rehabilitation Physician and an assessment by Occupational Therapist 2) Able to drive a non – modified automatic car.

CHAPTER 5. PSYCHIATRIC DISORDERS

CONDITION	MEDICAL STANDARDS
5.1 PSYCHIATRIC DISORDERS	<p>Not qualified for licensing :</p> <ul style="list-style-type: none"> • If the person has an Acute or Chronic Psychosis (e.g.Schizophrenia, Bipolar Mood Disorder), Depressive Psychosis; Organic Psychosis (e.g. Dementia or Drug-induced Psychosis etc.); or • If the person is using or dependent on psychotropic drugs which will impair driving performance on a long-term basis; or • If the person's judgment or perception, cognitive or motor function is affected by a mental disorder (e.g.Dementia, Post-Stroke, Adult ADHD); or • If the person has any psychiatric disorder with features such as aggression, violence etc. which are hazardous to driving; or • If the examining doctor believes that there is a significant risk of a previous psychotic condition relapsing.

CHAPTER 6. DRUG AND ALCOHOL ABUSE AND DEPENDENCY

CONDITION	MEDICAL STANDARDS
<p>6.1 ALCOHOL ABUSE AND DEPENDENCY</p>	<p>Not qualified for licensing :</p> <ul style="list-style-type: none"> • If there is alcohol dependency • If the person has a strong history of alcohol abuse and relevant biochemical findings <p>License may be granted after taking into account appropriate specialist opinion, nature of the driving task and subject to periodic review:</p> <ul style="list-style-type: none"> • If the person has stopped drinking for a substantial period (for at least 12 months); and • Is compliant with treatment; and • Shows no evidence of end organ damage relevant to driving; and • Shows no evidence of alcohol related seizures for at least two years.
<p>6.2 SUBSTANCE DEPENDENCE AND ABUSE</p>	<p>Not qualified for licensing :</p> <p>If there is clear evidence of dependency or persistent abuse of any psychoactive drugs.</p> <p>License may be granted after taking into account appropriate specialist opinion, nature of driving task and subject to periodic review:</p> <ul style="list-style-type: none"> • Persons who are compliant with treatment for illicit drug addiction (including Methadone or Buprenorphine medication) for at least 12 months; and • The severity of the addiction(s), the response to treatment and the driving requirements are taken into account.

CHAPTER 7. CARDIOVASCULAR DISORDERS

CONDITION	MEDICAL STANDARDS
7.1 ANGINA PECTORIS	<p>License may be granted when free from Angina for at least 6 weeks while on medication, but if indicated, to perform at least a resting ECG. A Stress Test or equivalent diagnostic investigation may be required.</p>
7.2 ACUTE CORONARY SYNDROMES (ACS)	<p>Driving to cease for a minimum of 6 weeks - return to driving will be permitted when the person is symptom free, there is no other disqualifying condition and the person is able to complete the exercise ECG to the required standards:</p> <ul style="list-style-type: none"> • There is an exercise tolerance of greater than 9 minutes (stage 3) on the Bruce Treadmill Test • Less than 2 mm ST segment depression on an exercise ECG <p>In addition the LVEF must be > 40%.</p>
7.3 ACUTE MYOCARDIAL INFARCTION	<p>Driving to cease for a minimum of 3 months - return to driving will be permitted when the person is symptom free, there is no other disqualifying condition and the person is able to complete the exercise ECG to the required standards :</p> <ul style="list-style-type: none"> • There is an exercise tolerance of greater than 9 minutes (stage 3) on the Bruce Treadmill Test • Less than 2 mm ST segment depression on an exercise ECG <p>In addition the LVEF must be > 40%.</p>
7.4 ANGIOPLASTY	<p>Driving to cease for a minimum of 6 weeks - return to driving will be permitted when the person is symptom free, there is no other disqualifying condition and the person is able to complete the exercise ECG to the required standards :</p> <ul style="list-style-type: none"> • There is an exercise tolerance of greater than 9 minutes (stage 3) on the Bruce Treadmill Test • Less than 2 mm ST segment depression on an exercise ECG <p>In addition the LVEF must be > 40%.</p>
7.5 CABG	<p>Driving to cease for a minimum of 3 months - return to driving will be permitted when the person is symptom free, there is no other disqualifying condition and the person is able to complete the exercise ECG to the required standards:</p> <ul style="list-style-type: none"> • There is an exercise tolerance of greater than 9 minutes (stage 3) on the Bruce Treadmill Test. • Less than 2 mm ST segment depression on an exercise ECG. <p>In addition the LVEF must be ≥40</p>

CONDITION	MEDICAL STANDARDS
7.6 LEFT VENTRICULAR ASSIST DEVICES	Not qualified for licensing permanently.
7.7 AORTIC ANEURYSM	<p>The person should not drive for at least 3 months post - repair.</p> <p>Not qualified for licensing if patient has a large (more than 5.5 cm) Aortic Aneurysm, Thoracic or Abdominal. Periodic reviews are necessary.</p>
7.8 CAROTID ARTERY STENOSIS	<p>Not qualified for licensing if symptomatic or the degree of stenosis is severe enough to warrant intervention.</p> <p>License may be granted if symptom free after repair or stent implantation.</p>
7.9 PERIPHERAL ARTERIAL DISEASE	License may be granted if there are no symptoms of severe limb ischemia.
7.10 DEEP VEIN THROMBOSIS (DVT)	Not qualified for licensing if the person has Deep Vein Thrombosis which is liable to recurrence or embolus.
7.11 ARRHYTHMIA	<p>Not qualified for licensing :</p> <ul style="list-style-type: none"> • If the person has a history of recurrent or persistent arrhythmia, which may result in syncope or incapacitating symptoms. <p>License may be granted when the arrhythmia is controlled for at least 3 months or the arrhythmia is successfully cured, provided that the LV ejection fraction is satisfactory (i.e. LVEF is > 40%) and there is no other disqualifying condition.</p>
7.12 PACEMAKER IMPLANT	<p>The person should not drive for at least 6 weeks after insertion of pacemaker and the person is symptom free.</p> <p>License may be granted thereafter provided that there are no other disqualifying conditions.</p>
7.13 SUCCESSFUL CATHETER ABLATION	License may be granted if there are no recurrent symptoms for 6 weeks and there are no other disqualifying conditions.
7.14 UNPACED CONGENITAL COMPLETE HEART BLOCK	Not qualified for licensing if symptomatic or severe bradycardia (Heart rate below 30 beats per minute).

CONDITION	MEDICAL STANDARDS
7.15 BIVENTRICULAR PACEMAKER	Not qualified for licensing permanently.
7.16 IMPLANTABLE CARDIOVERTER DEFIBRILLATOR (ICD)	Not qualified for licensing permanently.
7.17 PROPHYLACTIC ICD IMPLANT	Not qualified for licensing permanently.
7.18 HYPERTENSION	<p>Not qualified for licensing if Resting Blood Pressure consistently exceeds 180 mmHg systolic or more, and/or 100 mmHg diastolic or more;</p> <ul style="list-style-type: none"> • With or without medication or • Medication causes symptoms which affect driving ability. <p>License may be granted if the person is treated with Antihypertensive drug therapy and the blood pressure is not greater than 150/95 mmHg. Ideal blood pressure is less than 140/90 mmHg.</p>
7.19 CHRONIC AORTIC DISSECTION	<p>License may be granted :</p> <ul style="list-style-type: none"> • If maximum transverse diameter of the aorta, including false lumen / thrombosed segment, does not exceed 5.5cm • If blood Pressure is well controlled (120/80 mmHg).
7.20 MARFAN'S SYNDROME	<p>License may be granted :</p> <ul style="list-style-type: none"> • If no major organ involvement and there is no other disqualifying condition.
7.21 DILATED CARDIOMYOPATHY	<p>Not qualified for licensing : If symptomatic and ejection fraction < 40%. License may be granted, taking into account the opinion of a cardiologist, and the nature of the driving task, and subject to annual review: If there is an ejection fraction of > 40%.</p>
7.22 HYPERTROPHIC CARDIOMYOPATHY (HCM)	<p>Not qualified for licensing if symptomatic.</p> <p>License may be granted if they do not have more than one of the listed criteria below:</p> <ol style="list-style-type: none"> 1. There is no family history of sudden premature death from presumed HCM. 2. The cardiologist can confirm that the HCM is Anatomically mild. 3. No serious arrhythmia has been demonstrated i.e. Ventricular Tachy - arrhythmia excluding isolated Ventricular pre-excitation beats. 4. Hypotension does not occur during the completion of 9 minute exercise testing.

CONDITION	MEDICAL STANDARDS
7.23 HEART OR HEART LUNG TRANSPLANT	Not qualified for licensing.
7.24 PULMONARY EMBOLISM	<p>License may be granted, taking into account the opinion of an appropriate specialist, and the nature of the driving task, and subject to periodic review :</p> <ul style="list-style-type: none"> • After an appropriate non-driving period of a minimum of 6 months or as determined by the attending doctor; and • Depending on the cause of the embolus and response to treatment.
7.25 HEART VALVE DISEASE	<p>License may be granted after taking into account the opinion of a Cardiologist, and the nature of the driving task, and subject to annual review :</p> <ul style="list-style-type: none"> • If the person's cardiological assessment shows Mild Valvular Disease of no haemodynamic significance. • Three (3) months following successful surgery. • Ejection Fraction > 40%.
7.26 HEART FAILURE	<p>Not qualified for licensing if symptomatic.</p> <p>License may be granted provided that the LV ejection fraction is good i.e. LVEF is > 40%, the exercise/functional test requirements can be met and there are no other disqualifying condition.</p>
7.27 CONGENITAL HEART DISEASE	<p>Not qualified for licensing when complex or severe disorder(s) is (are) present after assessment by an appropriate consultant.</p> <p>Those with minor diseases and others who have had successful repair of defects or relief of valvular problems, fistulae etc. may be licensed provided that there are no other disqualifying conditions. Periodic reviews may be necessary</p>
7.28 SYNCOPE DUE TO HYPOTENSION (VASOVAGAL AND AUTONOMIC DYSFUNCTION)	Not qualified for licensing if the condition is severe enough to cause episodes of loss of consciousness without warning.

CHAPTER 8. DIABETES MELLITUS AND OTHER ENDOCRINE DISEASES

CONDITION	MEDICAL STANDARDS
<p>8.1 GENERAL GUIDELINES FOR DIABETES MELLITUS</p>	<p>Not qualified for licensing (for initial application and maintenance) if :</p> <ol style="list-style-type: none"> 1. Hypoglycemia within the previous 6 months which requires help from another person or producing loss of consciousness. 2. Hypoglycemia appearing in the absence of warning symptoms (hypoglycemia awareness). 3. Uncontrolled Diabetes: HbA1c > 12% within the last 6 months. 4. There is presence of end organ effects which may affect driving; <ul style="list-style-type: none"> • High risk Proliferative Retinopathy/ Diabetic Maculopathy • Peripheral Neuropathy or Cardiovascular Diseases with the potential to affect driving (refer to particular section).
<p>8.2 INSULIN TREATED DIABETES MELLITUS</p>	<p>All applicants on insulin should be assessed by attending doctor trained in diabetic care.</p> <p>Not qualified for licensing according to the above mentioned criteria in 8.1.</p> <p>Further exclusion criteria for insulin treated applicants :</p> <ul style="list-style-type: none"> • Have less than 2 follow-up clinic visits during the last year for diabetic care.
<p>8.3 METABOLIC AND ENDOCRINE DISORDERS (OTHER THAN DIABETES)</p>	<p>Because of the diverse manifestation of these conditions, each person will require an individual assessment regarding likelihood of acute loss of control of their vehicle.</p> <p>If there is a real risk of acute loss of control then the criteria would not be met; appropriate specialist's opinion must be obtained.</p> <p>Specific defects which may be associated with an Endocrine Disorder may also need evaluation, e.g. effects on visual field from Pituitary Tumours or Exophthalmos in Hyperthyroidism.</p>

CHAPTER 9. RESPIRATORY DISORDERS

CONDITION	MEDICAL STANDARDS
9.1 CHRONIC LUNG DISEASES (e.g Asthma, COPD, Interstitial Lung diseases)	Drivers who are diagnosed with chronic respiratory illnesses likely to interfere with their ability to drive despite optimal therapy will not be qualified for licensing. Note: - Public health aspects must be considered in drivers
9.2 RESPIRATORY FAILURE	Not qualified for licensing : If the person has severe respiratory failure. If the person has unstable diseases requiring oxygen therapy. License may be granted on an individual basis as assessed by a Physician or Psychiatrist.
9.3 NARCOLEPSY/ CATAPLEXY	License may be granted on an individual basis as assessed by a Respiratory Physician

CHAPTER 10. RENAL DISORDERS

CONDITION	MEDICAL STANDARDS
10.1 RENAL FAILURE AND OTHER RENAL DISEASES	Not qualified for licensing : <ul style="list-style-type: none"> If the person has end - stage renal failure (requiring dialysis) or advanced predialysis renal failure (GFR < 20% of normal). License may be granted , taking into account the opinion of a renal specialist, and the nature of the driving task, and subject to periodic review: <ul style="list-style-type: none"> If the patient's condition is stable with limited co-morbidities.

CHAPTER 11. MISCELLANEOUS

CONDITION	MEDICAL STANDARDS
<p>11.1 RESPIRATORYRELATED SLEEP DISORDERS</p> <p>(OBSTRUCTIVE SLEEP APNOEA SYNDROME / OSA)</p>	<p>Drivers who are diagnosed with OSA and require treatment are advised to have annual review by a ORL/ Respiratory specialist to ensure adequate treatment is maintained.</p> <p>Not qualified for licensing :</p> <ul style="list-style-type: none"> • If the person has established Sleep Apnoea Syndrome (Sleep Apnoea on a diagnostic sleep study and excessive daytime sleepiness) with moderate to severe sleepiness until treatment is effective. • If there is a history suggestive of apnoea in association with severe day time sleepiness, until investigated and treated. Severe sleepiness is indicated by frequent self-reported sleepiness while driving motor vehicle crashes caused by inattention or sleepiness or an Epsworth Sleepiness Scale score of >10 or OSA syndrome screening indicating high risk of OSA. <p>License may be granted, taking into account the opinion of a specialist (Respiratory/Otorhinolaryngology) in sleep disorders and the nature of driving task and subject to annual review:</p> <ul style="list-style-type: none"> • For those with established Sleep Apnoea Syndrome (Sleep Apnoea on a diagnostic sleep study and excessive daytime sleepiness) who are on satisfactory treatment.

**GUIDELINES FOR MEDICAL
EXAMINATION OF
VOCATIONAL DRIVERS**



GUIDELINES FOR MEDICAL EXAMINATION OF VOCATIONAL DRIVERS

INTRODUCTION

Medical examinations have been carried out as a requirement of the Road Transport Department (RTD), for the application of vocational driving licenses. This was conducted using the JPJ L8A form for new applications and the JPJ L8 form for renewal of licenses. Due to inconsistencies faced in the examinations being conducted by various medical practitioners, a standardized medical examination format has been developed by the Ministry of Health and Road Transport Department with input from clinical specialists, the Malaysian Medical Association (MMA) and the Malaysian Institute of Road Safety Research (MIROS).

OBJECTIVE

The objective of this format is to :

- Ensure the standardization of medical examinations being conducted by the government doctors and the private practitioners.
- To develop standards to be used in the determination of the fitness of the applicants

MEDICAL EXAMINATION

1. Who conducts the medical examinations?
 - Government Doctors
 - Outpatient Doctors
 - Specialists (who have fulfilled the qualifying criteria); for applicants who are under their follow up
 - Private Practitioners
2. Place of examination
 - Government Clinics
 - Private Clinics

3. Examination Standards

The medical examination standards for vocational drivers licensing are to be used to determine the fitness level of the applicants.

4. Confidentiality
 - All information obtained from the medical examination is confidential and may not be divulged to anyone without the permission of the applicant.
 - All data of the medical examination will be retained by the clinic where the examination was conducted.

MEDICAL EXAMINATION FORMAT

Part 1 : Applicants Information

This section describes the socio demographic details of the applicant and is to be completed by the applicant.

The section includes:

- i. Name of the applicant
- ii. Address
- iii. Identification card number
- iv. Date of birth
- v. Gender
- vi. Contact information

Part 2 : Medical History

Medical history is to be completed by the applicant with the assistance of the medical practitioner if necessary.

Declaration by the applicant

The applicant is to make a declaration on the accuracy of the information provided in Part 2 witnessed by the examining doctor.

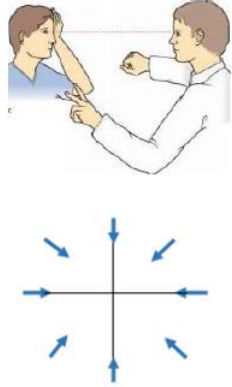
Part 3: Medical examination

A complete medical examination is to be conducted by the medical practitioner who is to enter the findings obtained in Part 3.

- a. General Examination
 - i. Weight
 - ii. Height
 - iii. Body Mass Index
 - iv. Date of Examination

- b. Specific Examination
 - i. Vision
 - Visual acuity is to be tested using Snellens Chart
 - Visual field tested using the Confrontation Method
 - Colour deficiency tested using Ishihara Charts

Confrontation Visual Field Test

Indication	To detect visual field defect	
Tools	Target: Finger or pen	
Steps	<ol style="list-style-type: none"> 1. Explain to patient regarding the test. 2. Examiner sits 1 meter in front of the patient. 3. Begin testing the patient's right eye by asking the patient to close his/her left eye. The examiner needs to close his/her right eye. 4. Please ask the patient to fixate at the examiner's eye at all times during this test. 5. At 50cm or in between the patient and the examiner, the examiner moves the target from 180° temporally towards the centre until the patient could detect the target. 6. Repeat step 5 from all other directions, including superior, inferior, temporal and nasal visual field. 7. Examiner must ensure the patient's eyes are always fixated to the examiner's eye during the entire test. 8. Repeat step 3 to 6 to test the left eye. 	
Result	Normal visual field- Patient could detect the target at all quadrants.	

- ii. Hearing
 - To be tested using the `Whisper Test`

WHISPER TEST*

Instructions

1. The examiner stands at arm's length (~0.6 m) behind the patient (to prevent lip reading)
2. The opposite auditory canal is occluded by the patient or examiner and the tragus is rubbed in a circular motion (goal; to block hearing from that ear)
3. The examiner exhales and whispers a combination of numbers and letters (example 4-K-2). *Whispering at the end of exhalation is to ensure as quiet and as standardized voice as possible.*
4. If the patient responds correctly, hearing is considered normal and no further screening is necessary on that ear.
5. If the patient responds incorrectly, then repeat using a different number-letter combination.
6. If on repeated testing, the patient can answer three out of a possible six numbers-letters correctly, the patient passes. If they cannot answer three out of six or more, the patient fails in that ear.
7. Repeat the sequence in the opposite ear using different combinations of numbers and letters. (Note: patients with memory problems may need a simplified letter/number combination to compensate for their inability to remember)

*Pirozzo S. Whispered voice test for screening for hearing impairment in adults and children:

Significance

Hearing loss prohibits patients from understanding conversations, contributes to cognitive decline, and leads to social isolation. This impairment is the third most chronic impairment among older people. It is also useful to ask the patient and family if they have noticed any changes in hearing, to describe any changes and if they have had any prior treatment.

Patients with no wax occlusion of their ear canal and who failed this test have a hearing loss that correlates with 30 dB loss. This level of hearing loss has a significant affect on communication.

- iii. Neurology and Musculoskeletal System This includes:
 - History of epilepsy
 - Symptoms of neurological disorders
 - Conducting the Romberg's Test
 - Examination of the Musculoskeletal System
- iv. Cardiovascular System
 - Blood pressure
 - Pulse rate
 - Apex Beat
 - Heart sounds
- v. Respiratory System
 - Respiratory Sounds
- vi. Diabetes Mellitus
 - A complete history of Diabetes Mellitus including treatment and attacks of hypoglycaemia

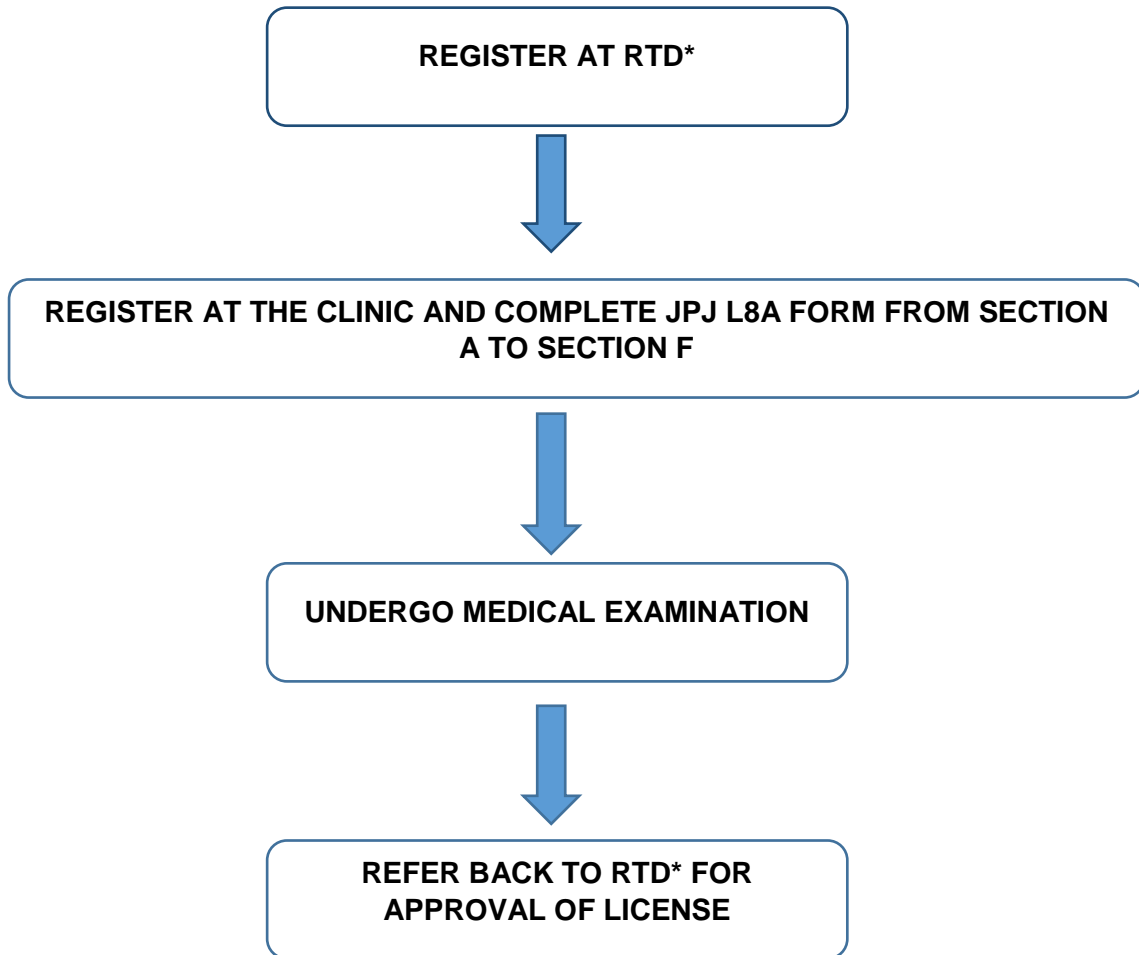
Part 4 : Investigations

- i. Blood Investigations
- ii. HBA1c testing for applicants suffering from Diabetes Mellitus

Part 5 : Certification of fitness

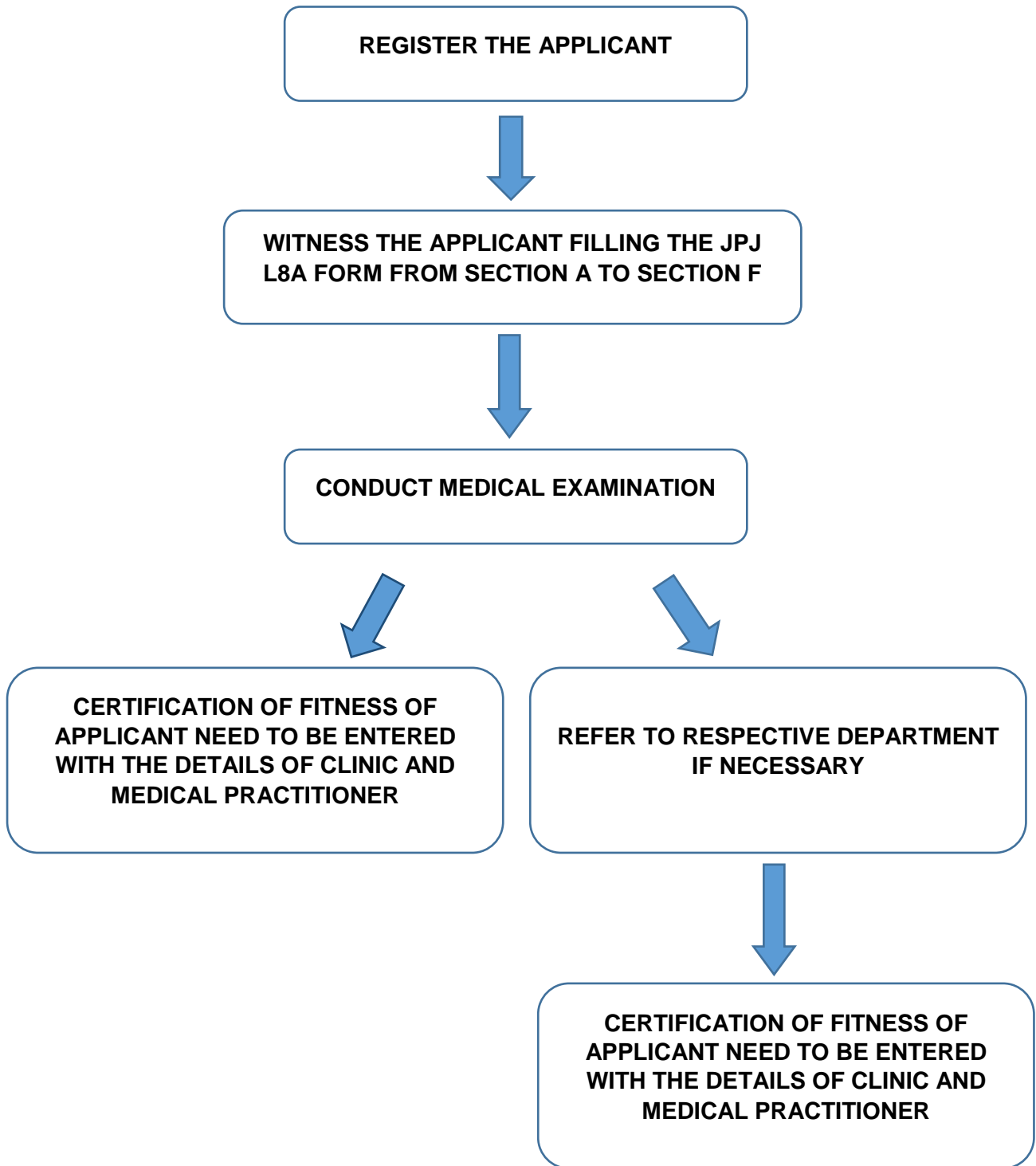
- i. Certification of fitness is to be completed by the examining doctor and indicates the ability of the applicant to apply for a vocational driving license
- ii. Information entered into the system during the examination will be registered and may not be altered

PROCESS FLOW FOR THE APPLICANT



****RTD : Road Transport Department***

PROCESS FLOW OF THE EXAMINING DOCTOR



REFERENCES

1. DuBois L. Clinical Skills for the Ophthalmic Examination: Basic Procedures, Second Edition. SLACK Incorporated, 2006.
2. Guides to the Evaluation of Permanent Impairment – American Medical Association, Chicago, 5th edition 2000.
3. webmedia.unmc.edu/intmed/geriatrics/reynolds/pearlcards/functionaldisability/whisper_test.htm
4. Practical medicine, P.J.Mehta, twelfth edition, reprint 1997
5. A Guide To Physical Examination And History Taking By Barbara Bates
6. Respiratory Examination By Richard Rathe <http://medinfo.ufl.edu/year1/bcs/clist/resp.html>



OCCUPATIONAL HEALTH UNIT

Disease Control Division
Ministry of Health, Malaysia
Parcel E, Block E10, Level 4
Federal Government Administration Centre
62500 Putrajaya



ISBN 978-98-3433-89-6



9 789833 433896

