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# KENYA LEARNER DRIVER HANDBOOK

PUBLIC SERVICE VEHICLE (PSV) DRIVERS  
2ND EDITION



**USALAMA  
BARABARA!**



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by the European Union



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Kenya learner driver handbook  
for Public Service Vehicle (PSV) Drivers  
(Category D1, D2, D3 and D4)

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#UsalamaBarabarani

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## **FOREWORD**

In our commitment to improve Road Safety, we have prepared this handbook as a guide for use by learner drivers. It is a comprehensive source for the rules and regulations, information and advice that you need to drive safely on the Kenyan roads.

It is important for every learner to get adequate training and practice before being issued with a drivers licence. You can become a safe driver through acquiring the necessary skills and understanding of the road environment, by always being alert and defensive and by accepting that the prime sole responsibility for your safety on the road is yours.

This book will help learners prepare for the drivers exam and also enable experienced drivers to refresh their skills from time to time.

I wish to thank the National Transport and Safety Authority fraternity for its steadfast efforts in not only preparing this material but also in striving to ensure our roads are safe.

**Chairman, NTSA.**

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## **ACKNOWLEDGEMENT**

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The Authority acknowledges the Ministry of Roads and Transport, Housing and Urban Development as well as the Kenya Urban Roads Authority, Kenya Roads Board, Kenya Rural Roads Authority and the Kenya National Highway Authority for their invaluable input.

We recognise the support provided by the different government agencies and ministries enabling us to prepare relevant and up to date publications. We extend our gratitude to the National Youth Service, National Police Service, Kenya Vision 2030 Delivery Board and the Nairobi City County Government.

We thank the industry players – organisations and individuals - who contributed to the preparation of these materials and for their participation in the two validation workshops. These include Matatu Welfare Association, KCSTD Union, Matatu Owners Association, Public Transport Operators Union (PUTON), Automobile Association of Kenya, Rocky Driving School, Kenya Institute of Advanced Driving and Abiria Tugutuke Foundation (ATF).

Thank you to the NTSA staff who oversaw this process and for their commitment to ensuring that our roads are kept safe. We look forward to continued partnership and collaboration in providing a modern and safe road transport system.

**GEORGE NJAO, E.B.S.  
Director General.**



## **UNIT 1: INTRODUCTION TO DRIVING**

Motor vehicles are an important part of our day-to-day living and provide a means for people and goods to be transported from one location to another.

The goal of driver training is to ensure that you, as the driver, are equipped with the right knowledge of how to handle your vehicle and how to act appropriately when using the road.

Most traffic accidents are caused by human error, however this can be easily prevented when the driver is adequately prepared for the traffic situation. This training also ensures that you are prepared with the necessary skills to provide safe and efficient transport services for goods and for passengers.

## **PSV DRIVERS (CATEGORY D)**

### **Minimum requirements for enrolment to train as a PSV Driver**

CATEGORY	Minimum age	Requirements
<b>D1 -</b> <b>D2-</b>	22 years	Medical test certificate. Minimum driving experience of 4 years.
<b>D3-MINIBUS/</b>	22 years	Medical test certificate. Minimum driving experience of 4 years.
<b>D4-SPECIAL BUSES</b>	22 years	Medical test certificate. Minimum driving experience of 4 years.

### **Requirements for issuance of a PSV Licence**

PSV Licence is categorised as a Professional Driver's Licence (PDL).

One must have a Certificate of Competence (CoC) issued under this curriculum.

## **UNIT 2: FUNDAMENTAL DRIVING RULES**

The road is governed by rules and regulations that ensure order is maintained on the roads at all times. These rules and regulations are derived from international, regional and Kenyan law. As a road user, you should be knowledgeable of these rules as it is the initial step in ensuring that you and other road users are safe on the road.

These rules and regulations can be found in the following documents:

- The Traffic Act.
- The Highway Code.

### **The Traffic Act**

The Traffic Act sets out the laws that govern the use of roads and the expected conduct of road users. It also includes some of the penalties and fines for road users who do not abide by these laws.

### **Highway Code**

The Highway Code is a set of information, advice, guides and mandatory rules for all road users in Kenya. It provides guidelines for animal, pedestrians, cyclists and motorcyclists. The purpose of the Highway Code is to promote safety, responsible behaviour and courtesy at all times. It is your responsibility as a road user to read the Traffic Act and Highway Code and learn the essential rules for safe driving or riding and the general rules of behaviour in traffic regarding safety, courtesy and responsibility.

Below are some of the traffic regulations that can also be found in the Traffic Act and the Highway Code:

#### **Use of the horn, when necessary, to warn other road-users**

- You may only use your car horn while your vehicle is moving and you need to warn other road users of your presence.
- Do not use the horn when you are stationary on the road.
- Do not use the horn aggressively even when the other road users are at fault.
- Do not use your horn at places where the 'No Hooting' sign has been placed.

Do not use your horn and at designated areas where hooting is always prohibited e.g. hospitals and schools.

**Give right-of-way for specific vehicles, road users or in specific situations such as:**

- Police cars.
- Emergency vehicles such as fire engines and ambulances sounding the siren or with flashing lights.
- The presidential motorcade.
- When asked to do so by a police officer or traffic marshall.

### **Pedestrian range**

You should not ride or drive in areas of the road designated for pedestrians and cyclist.

### **Boarding and Alighting**

- Passengers should only board and alight from vehicles at designated areas.
- The driver should allow the passengers sufficient time to get on or off the vehicle and provide assistance to vulnerable passengers.



**Alight from vehicles at designated areas**

- Do not chase or hang at the door at any time. The conductor or passengers should never stand at the doors while the vehicle is moving. Keep the doors shut while the vehicle is in motion and only open them to allow for entry or exit of passengers.



Do not chase or hang at the door at any time

## Traffic Signs and Signals

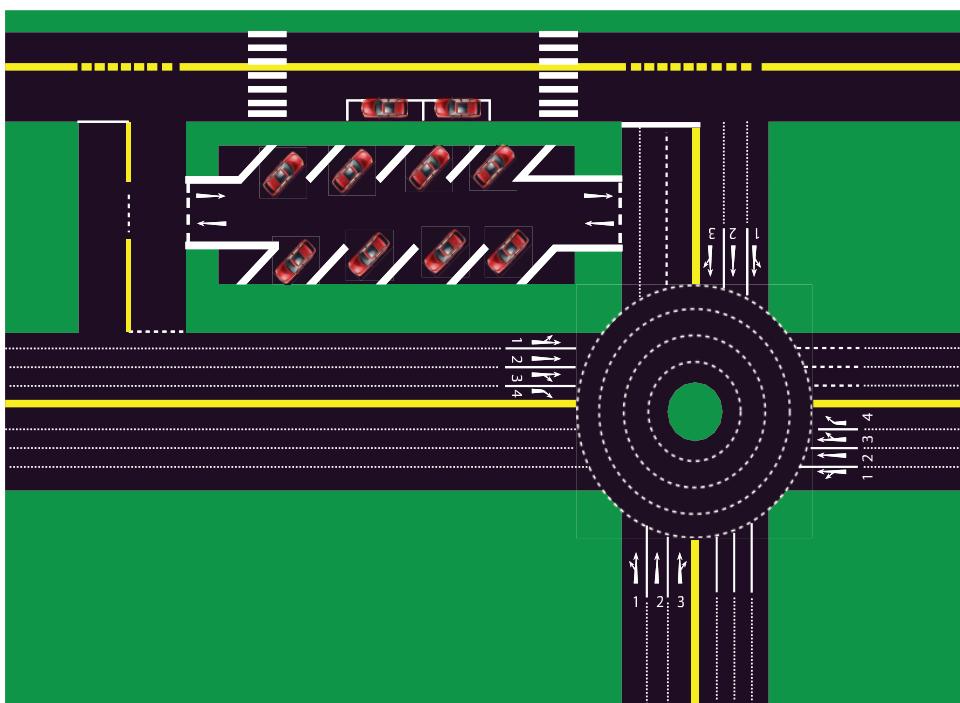
Traffic signs and signals are used to communicate on the road.

- Traffic signs are used to guide, provide information and warn all road users. Most signs fall within three broad categories although there are exceptions.
- There are two types of traffic signals; hand signals and light signals.

Traffic signs and signals are discussed in more detail in chapter six (Page 25) which focuses deals with different aspects of communication.

## **UNIT 3: MODEL TOWN BOARD**

The model town board is an example of a road network on a board. It is a simplified representation used to explain the types of roads found in major towns of Kenya and East Africa.



**The model town board**

The model town board has several features. These features are:

1. One-way traffic road.
2. Two-way traffic road.
3. Roundabout.
4. Parking zones.
5. Yellow kerb.
6. Pedestrian Crossing.
7. Stop sign.
8. Give way sign.
9. Exit from main road.
10. Exit from controlled parking zone.
11. Road markings – arrows, reflectors, and delta marks etc.

### **A. One Way Traffic Road (Dual Carriage Way)**

- This is a road where all traffic vehicles move in one direction.
- A road with white continuous or broken lines dividing the lanes into equal parts.
- A white continuous line means no changing lanes or overtaking.
- A White dotted or broken lines means you can overtake or change lanes if the road is clear/safe.
- Land or field refers to the green part on the left side of the road.
- A yellow marking protects the field. This yellow marking is known as the yellow kerb.
- Yellow kerb means no overlapping, no parking, no waiting and no stopping.
- Central reserve separates one-way traffic road.
- In between the central reserve, there is an exit from the main road or U-turn.
- Double yellow line separates a three-lane road or streets into equal parts. Vehicles in a street or an avenue move in one direction.

### **B. Two Way Traffic Road/Single Carriageway**

- This is a road where vehicles move in opposite direction.
- A road with single continuous or broken yellow line at the centre dividing the road into two equal parts.
- Yellow continuous line means you stick to your side or no overtaking.
- Yellow broken line means you can overtake if the road is clear.

On a single carriageway, all drivers need to obey the rules of roads in Kenya (keep left unless overtaking).

- There is a safe and marked area on the road known as a pedestrian crossing where the driver needs to slow down and stop so as to enable pedestrians to cross from one side of the road to another.

## C. Roundabout

- This is a meeting point of traffic where more than two roads meet at a point.
- The function of a roundabout is to facilitate the movement of vehicles in different directions without any obstruction or collision.

### Rules of the roundabout:

1. No stopping.
2. No changing lanes.
3. No parking.
4. No overtaking.
5. No waiting.

### The roundabout is divided into 3 parts.

- **Traffic Island:** Green part at the centre of the roundabout used to control the movement of the vehicles.
- **Innermost lane** (Lane 4): It is the only lane that allows the driver to go round and make a full circle or a 360° angle from a four lane road. The innermost lane is the only lane where a driver/rider is allowed to make a 270° angle from a three lane road.
- **Space** (Lane 3, 2 and 1): Drives on these lanes are not allowed to make a full circle or a 360° angle.
- You are required to keep left and move in a clockwise direction on the roundabout.
- Lanes are counted/numbered from the outermost lane to the inner-most lane.

### Common mistakes made when approaching the roundabout:

1. Approaching the roundabout in wrong lane.
2. Leaving/exiting the roundabout in the wrong lane.
3. Changing lanes on the roundabout.
4. Incorrectly observing the traffic lights.

## **D. Parking zones**

The model town board has two types of parking:

- Angle/ample/controlled parking zone.
- Flush/parallel/uncontrolled parking zone.

**Angle Parking:** In angle parking, vehicles are designated to flow in one direction. The parking area has a designated entrance and exit from both sides. These are the rules for angle parking:

- Strictly for small cars only (Saloon).
- Park from the farthest end (far end).
- Park by forward gear (direct).
- Leave/exit by reverse.

**Flush parking:** This kind of parking is found on the left side of road in the direction of traffic. It has no security thus it is an uncontrolled parking zone. The rules for flush parking are:

- All types of vehicles except tractors and trailers can park here.
- It has an entry but you must leave space for the exit.
- Park from the farthest end.
- Park by reverse.
- Leave/exit by forward (direct) driving.

## **E. Stop Sign**

- It is a red in colour and is an eight-sided figure (octagon) with white letters.
- It is positioned at a junction when joining a two-way traffic road.
- Traffic or vehicles are required to stop and look right, left and right again and only proceed if the road is clear.

## **F. Give Way/ Yield Sign**

This is a red triangular shape with the apex facing downward. It has a white border. Vehicles are required to slow down or stop if necessary and then only proceed if it is safe.

## **Rules of the model town board**

- Use the shortest and most correct route without using the parking.
- Use the longest and most correct route without using the parking.
- Only use the parking zone as a route as a last option (if there is no other route).

## **Directions on a four-lane road when approaching a roundabout**

### **Lane 1 has two options**

- Stay on lane 1, Go straight, 0°.
- Turn left at 90°.

### **Lane 2 has one option**

- Go straight only, 0°.

### **Lane 3 has two options**

- Stay on lane 3, go straight.
- Turn right at 90°.

### **Lane 4 has four options**

- Turn right at 90°.
- Come back at 180°.
- Turn left 270°.
- Go straight 360° after going round the roundabout clockwise direction.

### **NB: For lane 4**

Directions on a three-lane road when approaching the roundabout

### **The system is (2, 1, 5) Lane 1 has two options**

- Go straight 0°.
- Turn left at 90°.

### **Lane 2 has one option**

- Go straight only 0°.

**Lane 3 has five options**

- Go straight 0°.
- Turn right.
- Turn right 3 4 4.
- Come back 3 4 3.
- Turn left 3 4 4.

**NB: The 4th lane has three routes**

## **UNIT 4: HUMAN FACTORS IN TRAFFIC**

### **Observation**

When using the road, pay attention to your surroundings and stay alert whether you are walking, cycling, riding or driving a motor vehicle. Most accidents can be avoided when road users stay attentive.

Some rules for observation include:

- Keep your eyes moving round. Do not just focus on one angle.
- Get a wide view of what is ahead and behind you. This allows you to create enough room between you and the other road users.
- When driving or riding, make use of all mirrors; the rear view and wide view mirrors.
- Pay attention to the vehicle instruments.
- Ensure that other road users can see you.
- Watch other road users and in particular for cyclists, motorcyclists and pedestrians.
- When passing parked cars, watch out for opening doors and exiting passengers.
- Give special attention to vulnerable road users such as children, elderly people and persons with disabilities.
- Give special attention to users of non-motorized transportation such as horses, donkey carts, handcarts, bicycles and wheelchairs.

### **Health and Safety**

Health refers to your physical and mental well-being. It is important that at all times you make choices that will not interfere with your well-being. Any road user is more likely to make better judgment if they are in good health. The following are some of the issues that may interfere to ride safely.

#### **Eyesight and vision**

- Check your eyes. If you need spectacles to meet the required eyesight standard, ensure that you wear them before starting any journey.
- It is dangerous and risky to ride with uncorrected defective vision.
- Do not wear sunglasses or tinted helmet visors at night or in conditions of poor visibility.

## **Fatigue**

Fatigue is extreme tiredness as a result of mental or physical exertion. Do not start a journey if you feel tired.

### **The following may cause fatigue:**

- Insufficient sleep or rest.
- An extended length of time performing the same task.
- Sleep disorders and other illnesses.
- Riding at the time of day when you are usually resting or sleeping e.g. night driving, early morning driving.

### **Fatigue decreases your ability to make the right decisions, to avoid driver fatigue:**

- Get quality sleep before driving.
- Take regular breaks when driving over long distances.
- Eat balanced meals at regular intervals.
- Keep fit and healthy.
- Avoid driving at night (or daytime); whenever you are likely to feel sleepy.
- If you feel tired, stop at a safe place and rest.

## **Distractions**

Distractions in driving can be described as anything that reduces your ability to respond as quickly as you should during an emergency. For this reason some of these ordinary activities are prohibited for drivers.

### **Using hand held devices**

Using a cell phone, whether talking or texting, affects your ability to be keen on the road. Statistics indicate that the accident rate is significantly reduced when motorists refrain from using hand held devices. As a precaution, it is best to switch off phones so that ringing phone is not a distraction. Alternatively, it is good to put the cell phone or other devices out of reach for the duration of the journey.

**Radio:** It is fine to listen to the radio while driving but refrain from adjusting the volume, changing CDs or Mp3's while driving.

**Grooming, smoking, and eating:** Though these may be seen as fairly simple tasks, they are distracting. Do these before or at the end of the journey.

**Video devices:** These should not ever be placed in the driver's area of vision. Passenger sitting in the rear can have these but the volume must always be controlled to ensure that it is not distracting you as the driver.

**Communicating with passengers and other drivers:** Any of these can cause the motorist to loose focus.

#### **GPS units:**

It is always best to get directions for your destination before starting the journey. A GPS unit is an electronic device used to help the driver navigate through the road to the desired destination. The driver should always set the device before starting the journey.

**Carbon monoxide poisoning:** Carbon monoxide is an odourless gas emitted in the exhaust fumes. It can be lethal. For this reason, it is important to always check the exhaust system for any leakages. Never run the engine in an enclosed space and if you feel drowsy while driving, stop the car and get out for some fresh air.

#### **Alcohol, Drugs and Medicine**

Alcohol and certain drugs will affect your ability to drive.

- Do not drink and drive.

Some of the effects of alcohol are:

1. Alcohol slows down your brain functions. This affects your ability to respond, make decisions or react quickly.
2. Alcohol reduces your ability to judge how fast you are moving or your distance from other cars, people or objects.
3. It gives you false confidence – you may take greater risks because you think your driving is better than it really is.
4. It makes it harder for you to concentrate and pay attention to various details in traffic.

5. Alcohol also affects your sense of balance.

- A Police Breathalyser (Breathalyser) can measure your Blood Alcohol Concentration (BAC) accurately. It is an offence to refuse, or fail to comply with, a direction of a police officer in relation to an alcohol.
- Should you choose to drink alcohol, designate a non-drinking driver, take a taxi home or use public transport.
- Only accept a lift if you are certain the driver has not been drinking or using other drugs.
- Do not take medicine which causes drowsiness if you intend to use the road.
- Do not drive if you are unwell.



### Safety Belts

- All passengers must wear safety belts at all times no matter how short the distance being travelled.
- You must fasten your safety belt correctly.
- Use appropriate child restraints for children. A booster seat is recommended for children under 12. A booster seat is designed to enhance safety by ensuring that vehicle seat belt fits properly.

\*Children under 12 years old should not ride on the front passenger seat.

## **Litter**

- DO NOT discard litter on the roads.
- Litter can be a hazard to you and other road users.
- Always dispose litter in the dustbin before or at the end of your journey.

## **Road Rage and other forms of aggression**

- Be courteous on the road.
- If another road user provokes you, do not retaliate.

## **Prevention of theft**

When you leave your vehicle:

- Switch off the ignition and remove the keys.
- When you park your car ensure that it is appropriately secured to reduce the risk of theft.
- Lock all windows and the car boot.

## **Limitations in Number of Passengers and Quantity of Goods**

Do not carry more than the legally allowed number of passengers or weight of goods as this affects the safety of the vehicle.

Below is a table indicating the number of passengers allowed:

	Category	Passengers Allowed
CATEGORY D	Category D1 (Van)	Maximum 14 passengers.
	Category D2 (Mini Bus)	Between 14 and 32 passengers.
	Category D3 (Large Bus)	33 passengers and above not exceeding the capacity of the bus.
	Category D4 (Articulated buses)	33 passengers and above not exceeding the capacity of the articulated buses.

## Safety Equipment

All motorists should have certain safety equipment that could be used in case of an emergency.

Equipment	Function
Reflector Triangle 	All motor vehicles (excluding motorcycles) should have these at all times. The reflector should be used when the motor vehicle for any given reason stops on the road. These should be placed 60 metres ahead and 60 metres behind a disabled vehicle.
First Aid Kit 	A fully equipped first aid kit should have the following items - gauze dressings, triangular bandages, rolled bandages, safety pins, disposable sterile gloves, tweezers, scissors, alcohol-free cleansing wipes, sticky tape, antiseptic cream, painkillers such as paracetamol, antihistamine tablets, distilled water for cleaning wounds, eye wash and eye bath.
Tools Box 	Tools such as a jack and spanner can be used to do minimal repair when the vehicle is disabled.
Fire Extinguisher 	This enables the motorist to deal with fire emergencies. Ensure that the fire extinguisher is inspected regularly to ensure that it is good working condition.
Fire Axe 	In the event of a fire, the fire axe is a handy tool to rescue passengers.

Equipment	Function
Tow Ropes 	<p>This rope is reinforced to handle the weight of the car and can be used to tow vehicles in case of a breakdown.</p>
Spare Tyre 	<p>It is important to have an inflated spare tyre and restore the deflated tyre back as soon as possible. This tyre should be inflated.</p>
Jumpstart Cable 	<p>The jumpstart cable is used to reignite the engine.</p>
Survival Gear 	<p>This is particularly important for motorists operating in places with extreme conditions such as extreme cold, extreme heat and rough terrain that is likely to damage the car. Survival gear may include blankets, a torch, a small supply food and water.</p>

## UNIT 5: VEHICLE CONSTRUCTION AND CONTROL

This chapter gives an overview of the light motor vehicle construction and controls. You will also learn where these parts are situated in the light vehicle and how they function.

This is the control panel placed at the front of the vehicle or dashboard. The dashboard has instruments and controls used to run the vehicle. You should get to know the names and location of these controls. You should also know how these controls and instruments function and how to maintain them. There are slight differences in the dashboard depending on the make and model of the vehicle.

Below is a table indicating some of the components of a vehicle and their functions:

Component	Function
Steering Wheel 	This is used to change direction, or maintain the one you're driving in. Both hands should be on the steering wheel at all times except to change gears or to indicate.
Direction Indicator 	Used to indicate you wish to turn-signals turning left or right.
Gear Lever 	Used to change gears.

<b>Hand Brake</b> 	Used to keep your vehicle stationary, especially on inclines.
<b>Brake Pedal</b> 	Used to slow your speed or to stop.
<b>Accelerator</b> 	Used to increase your speed.
<b>Clutch Pedal</b> 	Used to change gears in a manual vehicle.
<b>Rear-view Mirror</b> 	Used to see other vehicles and hazards behind you for safety.

<p>Side Mirror</p> 	<p>Used to see vehicles behind and to your side for safety.</p>
<p>Windscreen Wipers Switch</p> 	<p>Used to turn your windscreen wipers on, off or to a higher or lower wiper setting for a clear view while driving in rain. Also used to try to clean your windscreen.</p>
<p>Speedometer</p> 	<p>Used to see at what speed you're driving at.</p>
<p>Temperature Gauge</p> 	<p>Used to check the vehicle's temperature to make sure the engine is not over-heating.</p>

## Components of a light vehicle

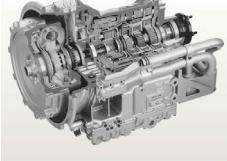
Name	Component
Engine	
Ignition	
Accelerator	
Vehicle Body	
Exhaust Pipe	
Gear Box	

Name	Component
Radiator	
Chassis	
Windscreen	
Bumper Bar	

### Light vehicle accessories:

Name	Component
Air-conditioning	
Antilock Braking System (ABS)	

## The light vehicle system

Name	Component
Braking System	
Steering System	
Transmission	
Suspension System	
Rim and Tyres	
Lights and Reflectors	

## **UNIT 6: SELF-INSPECTION OF VEHICLE**

Before embarking on a journey, any responsible driver should ensure that the vehicle is in the right condition for the journey. Self-inspection refers to checking on different aspects of the motor vehicle to ensure that it is safe to use.

Self-inspection allows the driver to know what maintenance or repair work ought to be done. Self-inspection should also be done at the end of the journey so that the driver or vehicle owner can plan for any repairs.

### **Self- inspection is divided into two parts:**

- Exterior inspection.
- Interior Inspection.

It is also important for the driver to know the common anomalies that may occur during long distance travel.

### **Exterior Inspection**

This is the inspection that the driver of the vehicle undertakes before starting the journey. There are various vehicle components that should be inspected before driving off. These are:

1.     Tyres.
2.     Reflectors and lights.
3.     Mirrors.
4.     Windshield wipers.
5.     Windows.
6.     The body.
7.     Cleanliness.
8.     Safety belts.
9.     Emergency equipment.
10.    Paperwork.

## **Tyres Safety Check**

It is important that the vehicle tyres are always in good condition. When tyres are in good condition, the driver is able to brake properly and to negotiate corners with ease.

- Give your tyres a visual inspection before and after every journey. Small stones wedged in the tread can cause problems later.
- Ensure that tyre treads are in good condition. Replace aging tyres.
- Ensure that the tyres are securely fastened.
- Check the tyre pressure.
- Recognize the danger of underinflated and overinflated tyres. Both are harmful to the tyre.
- Ensure you have a spare tyre that is in good condition.

### **(i) Reflectors and Lights**

- Ensure that the headlights, turn signals, and hazard lights are operational.
- Where possible, ask for assistance in checking the reverse lights since this can only be done when the vehicle is reversing.

### **(ii) Mirrors**

- Make sure that all your mirrors are present, properly adjusted and unobstructed before driving the vehicle.

### **(iii) Windshield Wipers**

- The windshield wipers must work at all setting.
- Make sure that you have wiper fluid.

### **(iv) Windows**

- Check all the windows, ensure that they can open and shut without difficulty.
- Ensure that the roll up handle is functional.

### **(v) The Body**

- Inspect the exterior body for any damage such as dents and scratches.

### **(vi) Cleanliness**

- Ensure that the vehicle is clean. Make sure that the windscreen, windows and mirrors are clean for ease of navigation.
- Ensure that your vehicle interior is clean and free of clutter to minimise distraction while driving and ensure that your passengers are as comfortable as possible.

### **(vii) Safety Belts and Car Seats**

- Inspect the safety belts to ensure that they are still functional.
- The safety belts should be clean.
- If using special child safety seats or booster seats ensure that they are also in good condition and that when in use, they are properly secured.

### **(viii) Emergency Equipment**

- Ensure that your emergency equipment is still in good working order. Emergency equipment includes the reflector triangle, a fire extinguisher, a first aid kit, a tools, the spare tyre and survival gear.

### **(ix) Paperwork**

- Ensure that you have all that you as the motorist have the appropriate licence that permits you to drive the car. Additionally, ensure that the vehicle is roadworthy and the correct registration and vehicle insurance.

## **Interior Inspection**

It is important to carry out the interior inspection to ensure that the vehicle is mechanically sound.

The following are some of the parts that should be inspected:

1. Brakes.
2. Steering.
3. Indicators.
4. Vehicle transmission.
5. Oil level.
6. Coolant check.
7. Battery.
8. Check for leaks.

### **(I) Brakes**

Ensure that the brakes are properly adjusted. To do this you may turn on the engine and do a few manoeuvres.

### **(II) Steering**

The steering wheel should have a full range of motion i.e it should be able to turn at 360 degrees. The steering wheel should be able to effectively turn the front wheels.

### **(III) Indicators**

Inspect all indicators to make sure that they are operational.

### **(IV) Gears**

Ensure that the vehicle is capable of shifting into any gear.

## UNIT 7: OBSERVATION

Observation is essential for safe driving. Observation refers to using your sight and hearing ability to get a clear perception of what is around. The driver's ability to observe effectively is influenced by driver visibility.

Driver visibility is the maximum distance at which a driver can clearly identify objects around the car. Driver visibility varies for each driver depending on the type of vehicle, the traffic conditions and the individual's own ability to see. To enhance driver visibility it is important to make use of all the mirrors in your vehicle.

- Check the mirrors by looking into the centre interior mirror, followed by the door mirror of the direction you are going.
- Note what is in the mirrors. Look for potential hazards such as vehicles driving closely behind you, vehicles approaching quickly from behind, motorcyclists and cyclists. Potential hazards may require further mirrors checks to eliminate the possibility of turning into actual hazards.
- If approaching a situation where you need to stop or slow down, special actions may need to be taken. A vehicle driving too closely behind may require that you gently slow your car down earlier than usual to provide the driver behind with more reaction time to slow down.
- A vehicle approaching quickly behind may require that you slow down slightly later than usual (if possible) to allow the driver with a greater stopping distance.
- Motorcyclists and cyclists are often be in the habit of pushing forward past slowing vehicles to reach the front of a queue. Such potential hazards require that you use all the mirrors to establish their location and checking the blind spot is extremely important. The blind spot is often required after the mirror checks.

**The blind spot** is the area around the vehicle that the driver cannot directly observe while driving. The blind spot varies according to the type of vehicle and the driver.

## Mirrors

Mirrors are placed at different parts of the vehicle to assist the driver to get a clearer view of what is around the vehicle. The mirrors eliminate or alleviate the vehicle blind spot.

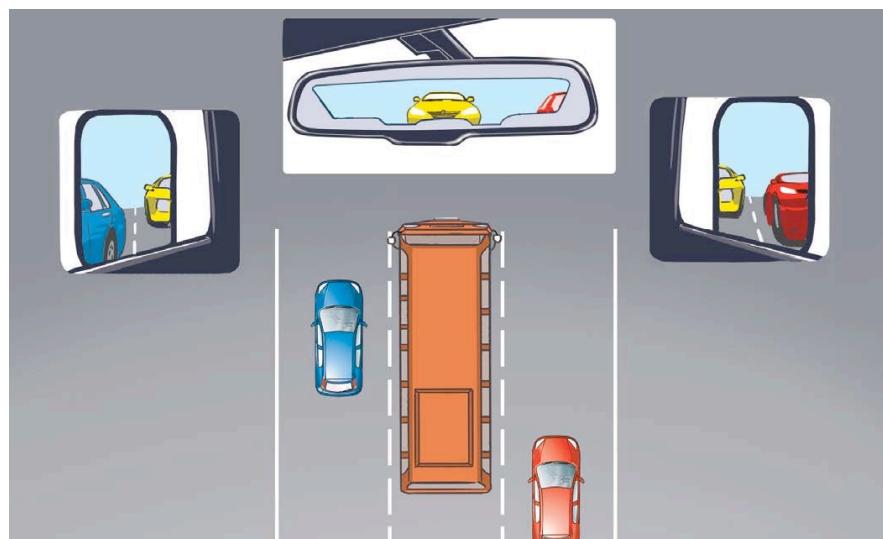
The blind spot should be checked before changing direction when:

- There are motorcyclists or cyclists close by.
- You are overtaking on a dual carriageway.
- You wish to change lanes.
- You wish to change lanes or direction when there is a potential hazard.

### Types of mirrors

#### Rear View Mirror (Interior mirror)

- These are made with flat glass and do not give a distorted image of what is reflected. This makes it possible to judge the speed and distance of following traffic.
- You should only adjust this mirror when the vehicle is stationary.
- You should be able to view the whole of the rear window in the interior mirror.



## **Exterior Mirror**

These are convex mirrors, which are made using curved glass. Convex mirrors give a wider field of vision but this make judging the speed and position of following traffic more difficult. Vehicles appear smaller and further away than they actually are. You should adjust the exterior mirrors so that you can get the best rear view with minimal head movements. The horizon should appear in the middle of the mirror.

- Correctly positioned.
- Too much sky.
- Too much car.
- Correctly positioned.

## **Nearside Mirror**

This is the one that's closest to the kerb.

## **Offside Mirror**

The offside mirror is the one that closest to the inner lane marker.

## **UNIT 8: VEHICLE CONTROL**

This section allows you to start putting your theoretical knowledge into practice. You will be asked to demonstrate certain aspects of your theoretical training at the manoeuvre yard. The manoeuvre yard also provides you with an opportunity to practice and gain confidence in driving before taking the car out to the road. These are some of the essential skills you must have before you are allowed to proceed to the road.

### **Driving Preparation**

As a learner you should be able to make the appropriate preparations before driving the car. These preparations include the vehicle self-inspection as explained in Unit 8 above. Once you are certain that your vehicle safe to drive.

- Adjust your driving seat to ensure that it is suitable for you.
- Adjust the mirrors if it is necessary.
- Check the doors to ensure that they shut properly.
- Fasten your seat belt and ensure that all passengers also do the same.
- Sit in the correct driving position – your back should get adequate support and your feet should reach the pedals.
- Hold the steering wheel correctly – It should be held with both hands in the positions illustrated below. Your hands should hold the steering wheel naturally, not too stretched or too bent.
- From this position you should get a clear view of what is ahead of and around you. You should also comfortably operate the brakes and the accelerator.
- Check all the instruments at the dashboard and ensure that they are all in good working order.
- Once this is done you can turn on the ignition and start practicing your driving skills.

## **Car Movement and Control**

### **1. To start the vehicle**

- Fully depress the clutch pedal and wait for three seconds
- Start the engine as follows:
  1. Put the hand brake ON.
  2. Turn the ignition switch ON.
  3. Turn the motor switch ON.
- Start motor control by turning the ignition key and releasing it when the engine starts:
- Step lightly on the accelerator to warm the engine.
- Check rear view mirrors.
- Give the proper signal before moving.
- Select the appropriate gear.
- Increase the engine speed using the accelerator.
- Move the handbrake to the OFF position.
- Let the clutch pedal rise until the engine speed decreases slightly under the load. Keep your feet in this position – on the clutch and accelerator pedals.

### **2. To stop the vehicle**

- Check the rear view mirrors to ensure that it is safe to stop.
- Signal properly to alert other road users.
- Remove the foot from the accelerator.
- Apply pressure on the foot brake and maintain it as necessary.
- Depress the clutch pedal as the car comes to rest and maintain the pressure.
- Set the hand brake at the ON position.
- Put the gear lever in the 1ST position.
- Switch off the engine.
- Remove your foot from the clutch pedal and then from the brake pedal.

### **3. Using the gears**

Most vehicles have five forward gears and one reverse gear. You should know the appropriate gear speed to be used when driving. You should learn to proficiently change from 1st gear without looking.

The neutral position is where no gear is selected. Before starting the engine, the gear should be in neutral position.

#### **Gears**

**2nd Gear** – The gear gives the greatest power. It is used for moving off, building up speed after moving away and driving at low speeds e.g. in slow moving traffic because it is more economical. It is also the ideal gear for moving downhill from a stationary position.

**3rd Gear** – This is used to build up speed and when you need more power for climbing hills. It also increases your control when going down steep hills and dealing with some bends. This is the appropriate gear for travelling between 35 and 70 km/h.

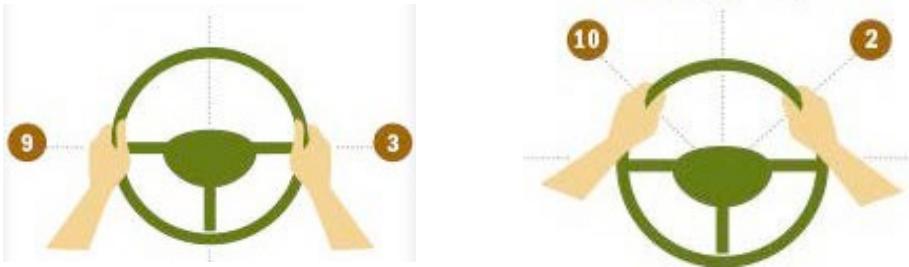
**4th Gear** – This is the appropriate gear for travelling between 60 and 110 km/h where there are no hazards to confront. The 4th gear provides more power and speed to the engine and can be used when overtaking another vehicle.

**5th or 6th Gear** – Not all vehicles have a 5th or 6th gear which gives better fuel economy. This is normally only used on open roads (on highways where the speed limits are higher); when travelling constantly at higher speeds (between 80 and 110 km/h).

**1st Gear** – This gear is for travelling between 30 and 0 km/h - for manoeuvres and negotiating hazards.

### **4. Steering the vehicle**

- Hold the steering wheel correctly.
- To steer in a straight course position your hands in the 10-minutes-to-2 position and aim the car in the general desired direction. Lightly correct the vehicle's tendency to turn from the neutral position.
- To avoid injury from the airbag position your hands in the 9 and 3 position.
- To change direction, pull the steering down in the direction you wish to turn. Bring it down to meet your other hand then push the steering wheel up until the turn has been executed.

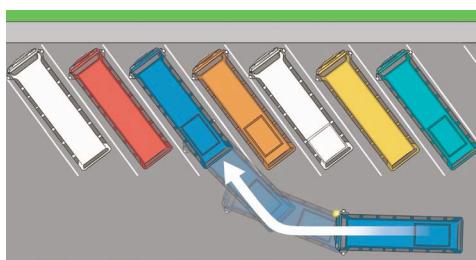


## 5. Parking at the kerb

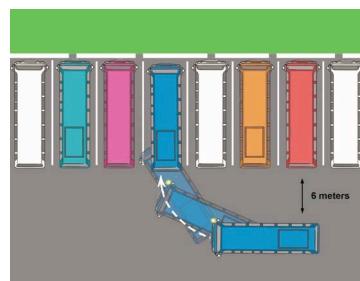
You should always find a parking space that is legal and convenient to park. To park your vehicle take the following steps:

- Look into your rear view mirror so that you can know what is around you. If there are no vehicles behind you, you may slow down to get a clearer picture of what is around you.
- Locate a safe and convenient parking position.
- Use your indicator signals to inform other road users of your intention to slow down and park.
- Slow down the vehicle by covering the brake and the clutch.
- Gradually move to a suitable distance from the kerb.
- Apply the brake gently and 5 metres from your intended stop, press the clutch as to avoid stalling the car.
- Stop. Apply the handbrake and select neutral to cancel the indicator.
- Remove feet from the pedals.

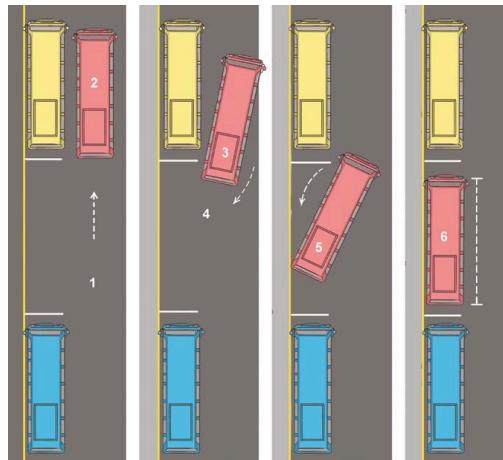
### Different types of parking.



Angle parking



Flash parking

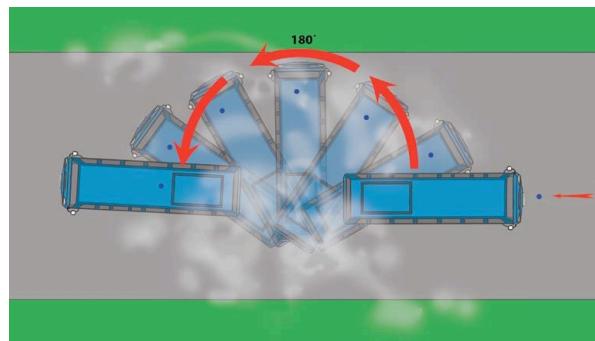


Parallel parking

## 6. Turning J-turns

A J-turn is a driving manoeuvre in which a reversing vehicle turns 180 degrees and continues, facing forward, without changing direction of travel.

Only a confident driver who has had a sufficient experience driving on different road surfaces should do this type of turn.

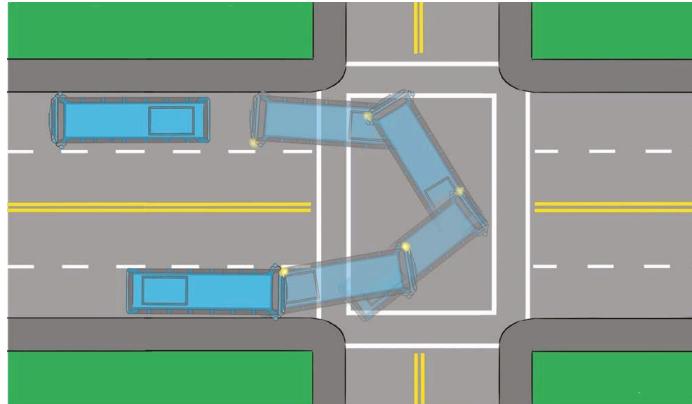


J-turns

## U-turn

A U-turn is a driving manoeuvre in which a forward driving vehicle turns 180 degrees and continues, facing forward, but moving in the opposite direction.

Before you make a U-turn, check to make sure that there is no sign that says you should not. To make a U-turn safely, you must be able to see well both sides.



U-Turn by forward driving

## 7. Driving on Bends

When approaching a bend, it is important to note how sharp the bend is. Look out for road signs and markings which would indicate the type of bend you are going to encounter.

Adjust your speed accordingly. If you are too fast you are more likely to skid or lose control of your car.

Surrounding trees, hedges, buildings and streetlights can give you a good indication of how sharp the bend is if there are no road signs.

As you approach the bend, apply the MSM technique to communicate with other road users:

- Slow down and select a lower gear.
- Do not brake as you steer round the bend.
- When leaving a bend, check your mirrors and gently accelerate to the speed appropriate for the traffic conditions.

## 8. Driving on Hills

This requires you to anticipate what is ahead of you. While going downhill you have a clearer view but going uphill you see less of what is ahead of you. When driving downhill, switch to a lower gear so that the engine controls some of the braking. This protects your brakes from excessive wear and tear.

It takes longer for the vehicle to stop therefore, you need a greater

stopping distance. When driving uphill, switch to a lower gear so as to maintain your speed.

## **9. Reversing**

- Use your mirrors to assist you in seeing what is behind you.
- When reversing, you may tilt your head so that you can see beyond the head restraint.
- Always reverse at slow speed so as to retain control of your steering.
- To steer the car in reverse, turn the wheel in the direction you want the rear of the car to go. Turning the wheel to the right steers the back of the car to the right. Turning the wheel to the left steers to the left.

## **UNIT 9: COMMUNICATION ON THE ROAD**

Road users communicate with each other using a prescribed set of signs and signals to avoid confusion and misunderstanding on the road. This is done using hand gestures, signal lights and responding to instructions from traffic marshalls and police.

### **MSM technique (Mirror, Signal and Manoeuvre)**

The MSM technique is a simple procedure that helps drivers communicate on the road. It is a routine that is convenient in many different situations.

#### **The MSM technique should be used:**

- Before moving off.
- Bust before signaling.
- Before any change of direction including turning left or right, overtaking other vehicles or cyclists and changing lanes.
- Before any changes in speed. This also includes an increase of speed as a vehicle may be trying to overtake you as you gain speed. More importantly however is when slowing or coming to a stop either in traffic or parking up.

#### **Mirror**

- Check the mirrors by looking into the center interior mirror, followed by the door mirror of the direction you are going.
- Note of what is in the mirrors. Look for potential hazards such as vehicles driving closely behind you, vehicles approaching quickly from behind, motorcyclists and cyclists. Potential hazards may require further mirrors checks to eliminate the possibility of turning into actual hazards.
- If approaching a situation where you need to stop or slow down, special actions may need to be taken. A vehicle driving too closely behind, may require that you gently slow your car down earlier than usual to provide the driver behind with more reaction time to slow down. A vehicle approaching quickly behind may require that you slow down slightly later than usual (if possible) to allow the driver with a greater stopping distance.
- Motorcyclists and cyclists can often be in the habit of pushing forward past slowing vehicles to reach the front

of a queue.

- Such potential hazards require that you use all the mirrors to establish their location and checking the blind spot is extremely important. The blind spot is often required after the mirror checks.

### **Signal**

- Signals should be applied to the direction you intend to take.
- Signals depend on what you see in your mirrors.
- If you notice a potential or actual hazard located in your mirrors may have to alter your intended route and not apply a signal. It's therefore, important that a signal is applied immediately after the mirrors. If there is a delay, the mirror sequence must be repeated.
- Signaling must be applied in good time. Signaling too late may not provide vehicles behind with enough time to react if you are intending on slowing or stopping the car. Signaling too early can give the impression you are taking a turn sooner than the actual turn you intend, or that you are parking up, leading to confusion. If parking up, ensure you do not signal before a junction.

### **Manoeuvre**

- The manoeuvre part of MSM applies at different situations such as roundabouts, junctions, changing lanes or parking.
- You should always be prepared to alter the MSM routine depending on circumstances. If driving in an area with potential hazards, pedestrians or cyclists for example, you may need to check the mirrors and blindspot once again before committing to the manoeuvre.
- Be prepared to alter your speed or destination even at the very last moment. Cyclists, pedestrians and other vehicles can be unpredictable.

## **Signals Given by Road Users**

### **(a) Hand signals given by drivers**



I intend to turn to my left or I intend to move out to my left



I intend to turn to my right or I intend to move out to my right



I intend to slow down

### **(b) Hand signals given by drivers to traffic police**



I intend to move left



I intend to move right.



I intend to go on straight

### **(c) Light signals given by vehicles and motorists**



I want to turn left



I want to turn right



I am applying the brakes



I intend to reverse

(d) Hand signals given by motorcyclists



I intend to turn to my left.



I intend to move out to my right



I intend to slow down

(e) Hand signals given by cyclists



I intend to turn left



I intend to slow down.



I intend to turn right

(f) Hand signals given by traffic police officers



STOP, traffic approaching  
from behind



STOP, traffic  
approaching from both  
behind and in front



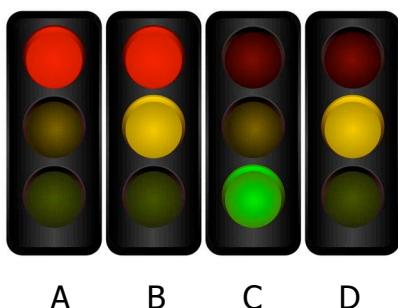
Come on



### (g) Signals given by traffic marshals



### Traffic Light Signals

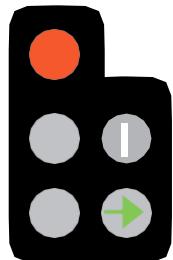


A: RED means STOP

B: RED and AMBER also mean STOP They alert the driver to get ready

C: GREEN means you may go on if the road is clear

D: AMBER means STOP at the line



A GREEN arrow may be provided in addition to the full green signal if movement in a certain direction is allowed before or after the full green light phase. If the way is clear you may go, but only in the direction shown

### Traffic Signal Blackout

If traffic signal lights are not working because of an electrical power failure:

- Stop at the intersection.
- Proceed when you know other turning and approaching vehicles, bicycles, or pedestrians have stopped.

## **UNIT 10: SPEED MANAGEMENT**

A major cause of road accidents is reckless driving and over speeding. Before deciding what speed to drive at take into consideration the laws determining the speed limits of the particular road you are using and the road conditions.

The higher the speed of a vehicle, the shorter the time a driver has to stop to avoid a crash. Overall, accidents are more severe when the driving speed is high. The choice and ability drive at a high speed is influenced by:

- The driver's choice to make responsible or irresponsible decision on the road.
- The road conditions.
- Traffic and the surrounding environment.
- It is important to remember that pedestrians face great risk when vehicles are driven at high speeds.
- How poor speed management affects driving.
- At high speeds it is more difficult for the driver to stay in control especially when negotiating corners.
- The driver will have less time to respond to poor or changing road conditions and any changes in the weather.
- The driver may not notice any new hazard warning signs or other traffic signs.
- The fuel consumption may increase due to poor efficiency.

**Drive at a reasonable speed and within the designated speed limits.**

### **The 4-second rule**

- Is a guideline that enables you to estimate the minimum distance you should travel behind the vehicle immediately in front in adverse weather conditions such as rain or fog.
- To apply the 4-second rule, when the vehicle in front of you passes a landmark such as a sign or a bridge, count one thousand and one, one thousand and two, one thousand and three, one thousand and four.
- If you pass the landmark before you finish counting, then you are too close and you should increase your distance from the vehicle in front of you.

## **Braking distance**

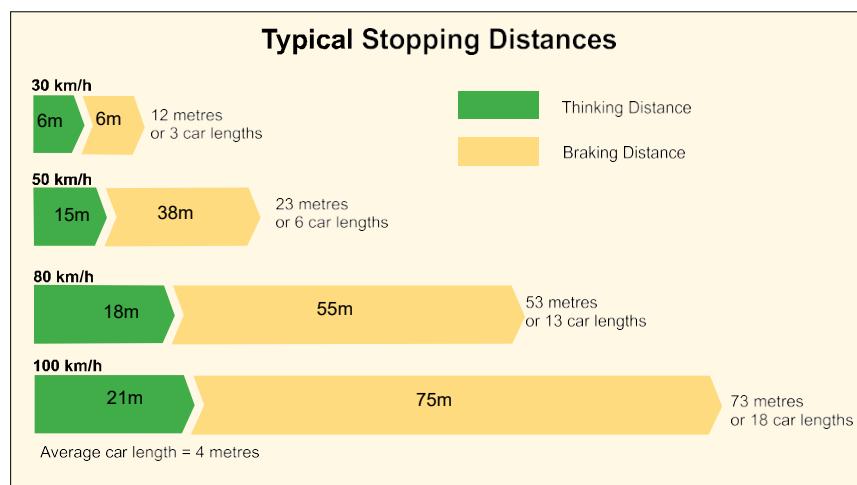
- Is the distance the vehicle travels between hitting the brakes and coming to a stop.
- When on poor roads with wet or icy conditions, the braking distance increases.
- As the vehicle's speed increases, so does the braking distance.
- If the vehicle is in poor condition due to worn out tyres, poor brakes or overloaded, the braking distance will increase.

## **Thinking distance**

- Is the distance the vehicle travels after the driver decides to hit the brakes and when the driver actually brakes.
- Thinking distance is affected by speed, driver fatigue and distractions.

## **Stopping Distance**

- Is both the thinking distance and the braking distance added together.



## **Braking Systems and Techniques**

There are different types of brakes. These are: disc brakes, drum brakes, and handbrakes.

- Brakes are located on all four wheels of the vehicle.

- Some vehicles have disc brakes on all four wheels while others have drum brakes on the back wheels.
- Braking pushes the weight of the vehicle forward, therefore, the front brakes of the car play a more crucial role than the rear brakes.
- The handbrake applies the two rear brakes.

**Freewheeling** is moving the vehicle without using power. It is also known as coasting. In driving this is a technique achieved by depressing the clutch so as not to use the engine to move.

**Drivers most frequently freewheel in the following situations.**

- When turning at junctions.
- Before making a stop.
- When changing gears.
- When keeping the gear in neutral to save petrol.

**Risks of Freewheeling**

- Freewheeling reduces one's control of the vehicle because the engine is not engaged. When the engine is engaged, the driver can brake with more ease.
- Freewheeling is also risky because there are times when the driver needs to accelerate to prevent an accident but freewheeling prevents the use of the accelerator.
- Freewheeling increases pressure on the brakes because the engine is not engaged in the process of slowing down the vehicle to a stop. This results in increase wear and tear of the brakes.
- Fuel consumption in freewheeling is the same as fuel consumption for an idle engine. A small amount of fuel is needed to keep the engine active. As such freewheeling does not save petrol.

When the driver needs to stop, progressive braking is safer than freewheeling because it reduces wear on the braking system and on the tyres and ensures that the driver maintains control of the vehicle.

## **UNIT 11: SPACE MANAGEMENT**

To drive safely, it is important to manage the space around your vehicle. You do this by controlling your speed, the position of your vehicle in the lane and communicating on the road.

In order to manage your space effectively you should be aware of the different road conditions when driving. These can be broadly divided into three categories.

**(i) Open Condition** – This occurs in large areas where the driver can get a clear broad view of the road and surroundings and there are no restrictions or obstacles blocking the view. In these conditions, it is easy to adjust speed and change lanes.

**(ii) Closed Conditions** – In this case, there is limited space and the driver's view is also restricted due to various obstructions such as trees, buildings and other vehicles blocking the view.

**(iii) Changing Conditions** – This occurs where there are changes in the speed limit, the road surface conditions, the width of the lane, visibility influenced by the weather or the time of the day and the traffic flow. All these are conditions that may be unpredictable or may need specific actions by the driver. In all the above-mentioned conditions, the driver has to maintain an appropriate space around the vehicle for safe driving. This is the space envelope.

### **To manage space**

- Drive at the same speed as the vehicles around you in traffic.
- Maintain a safe following distance between your vehicle and the vehicle ahead of you (Discussed in UNIT 7 on speed management).

### **Space Recovery**

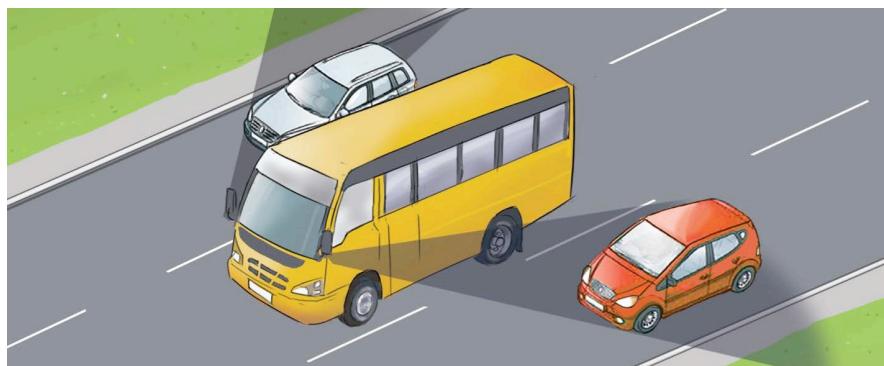
When you realize that there is insufficient space in front of the vehicle.

- Signal so that the vehicles around you know that you intend to slow down.
- Turn slowly to give yourself and other drivers more space to avoid problems.

- Be aware of the size and weight of oncoming vehicles, give them room to pass but do not reverse as this will affect the vehicles behind you.
- Ensure that you have sufficient space to get across or join a lane.

### **Position to 'See and be seen'**

Position the vehicle as indicated below



## **Unit 12: EMERGENCY MANOEUVRES**

When driving along the road, the driver may need to make sudden and unexpected manoeuvres so as to avoid accidents or any imminent danger. Emergency manoeuvres involves quick and efficient moves.

### **Safely performing evasive turns on the road**

Evasive manoeuvre driving is important in getting out of situations of danger. Some of the skills that you should learn include optimizing the braking distance and making J-turns and U-turns. This is addressed in Unit 8.

### **Brake failure**

- If your brake fails, try pumping the brake pedal to temporarily restore hydraulic brake pressure. If this does not work, apply the parking brake (hand brake) gently but firmly while holding the release button.
- Total brake failure is rare on modern vehicles but if your brakes fail and you manage to stop, do not drive again. Call for help from your mechanic.

### **Blowouts**

In order to drive Through a Tire Blowout:

- Keep a firm grip on the steering wheel.
- Do not slam on the brakes.
- Let your car slow down gradually.
- Pull to the side of the road once you have slowed to a safe speed.
- Activate your emergency flashers.

### **If your wheel goes off the pavement**

- Hold the steering firmly.
- Take your foot off the gas pedal to slow down, avoid heavy braking.
- When the vehicle is under control, steer towards the pavement.

### **If your headlights go off**

- Check the switch immediately.
- If the lights remain off, keep to the left and bring your

vehicle to a safe stop off the road.

- It is dangerous and illegal to drive at night without lights
- Defensive Driving.

Defensive driving is safe driving or cautious driving in cases where the driver needs to be more vigilant particularly in an environment that could cause danger. It goes beyond mastering the rules of the road and basic mechanical skills and is taught to experienced drivers.

### **Importance of defensive driving**

- It allows you to be prepared to avoid accidents.
- It allows you to provide more protection to yourself and/or passengers.
- It enables you to save lives in situations of danger.
- It enables you to save money by limiting wear and tear to your motor vehicle and any unexpected damage.
- It prepares you to act accordingly in adverse riding conditions.
- Defensive driving is important when in the following condition; Adverse weather conditions such as rain, fog or windy. In these cases, the road surface may change and so you need to apply different techniques to avoid danger.
- Different road conditions that may be difficult to manoeuvre such rough terrain, wet surface or sloping surfaces.
- Defensive driving techniques.
- Improving observation, anticipation and awareness consistent with the riding speed.
- Applying sound judgment of speed and distance.
- Don't drive when you are tired, rest before any journey.

## **UNIT 13: SKID CONTROL AND RECOVERY**

A skid happens when your wheel slide out of control on a slippery surface. Skids can involve the front, rear or all four wheels. Even careful drivers experience skids. You lose traction and your wheels spin or lock, usually when braking, cornering or accelerating.

### **Causes of Skid:**

- Driving too fast for road or traffic conditions.
- Sudden, hard braking.
- Going too fast around a corner or accelerating too quickly.

### **Types of Skidding**

#### **The Front Wheel Skid**

This happens when the vehicle goes off the intended course. It is caused by excess speed on entry and a corner or a bend. It also occurs during sudden braking when negotiating a hazard.

#### **The Rear Wheel Skid**

This occurs when the rear of the vehicle swings out of the line as if the vehicle is trying to overtake at the front. It is often caused by excessive speed leading to sudden braking in a hazard situation.

#### **Aquaplaning**

Driving too fast or at an excessive or inappropriate speed on a wet road causes aquaplaning. When the tyre tread cannot channel away enough water, the tyre(s) lose contact with the road and the vehicle floats on a wedge of water.

Aquaplaning can be avoided by reducing speed in wet conditions. Having the correct tyre pressure and tyre tread depth will maximise your tyres' ability to maintain their road grip. If it happens, ease off the accelerator and brakes until your speed drops sufficiently for the car tyres to make contact with the road again.

#### **To correct skidding:**

- Take your feet off the accelerator pedals.
- Release the brake pedal and reapply the brakes gently.

- Quickly turn the steering wheel in the direction you want to go.
- As your vehicle turns back in the correct direction, you may then need to steer in the opposite direction so as to stay on your desired path.

**Most cases of skidding are caused by human error. These include sudden acceleration, excessive or sudden breaking and poor steering.**

## **UNIT 14: ADVERSE DRIVING CONDITIONS**

The first step in dealing with adverse driving conditions is to be prepared by training for these conditions and preparing the vehicle for these conditions. Ensure that the vehicle has good tyre tread, firm brakes and streak-free wipers. Situations that are considered adverse driving conditions are:

### **Night Driving:**

In this case, the driver's vision and visibility is greatly reduced by the absence of natural light.

- Slow down when driving at night, especially on unlit roads.
- Reflective roads can mislead you to believe that you can see further than you really can.
- Do not over drive your headlights – going fast that your stopping distance is farther than you can see with your headlights.
- Give yourself enough room to make a safe stop.
- When meeting oncoming vehicles with bright headlights at night, look up and beyond and slightly to the left of the oncoming lights.
- Cut down bright lights at night by following the rule of the road for vehicle lights.
- Use your low beam headlights within 150 metres of an oncoming vehicle or when following a vehicle within 60 metres.
- In rural areas, switch to low beams when you come to a curve or hilltop so you can see oncoming headlights and won't blind oncoming drivers. If you can't see any headlights, switch to high beams.

### **Other Extreme driving conditions**

- Fog.
- Windy condition.

- Heavy rain.
- Hot weather.
- Dusty conditions.

### **Fog**

- Slow down gradually and drive at a speed which suits the condition.
- Make sure the full lighting system of your vehicle is turned on: use your low beam headlights as high beams reflect off the moisture droplets in the fog making it harder to see. Otherwise, use fog lights if your car has them.
- Always be patient – avoid overtaking, changing lanes and crossing traffic.

N/B: If visibility is decreasing rapidly, move off the road and into safe parking area and wait for fog to lift.

### **Rain**

- Rain makes the road surface slippery and reduces visibility.
- Ensure your windshield wiper blades are in good condition (no streaking while cleaning).
- Try to drive in clear sections of the road, look ahead and plan your movements.
- Smooth steering, braking and accelerating will reduce your chances of skidding.
- Leave more space between you and the vehicle ahead of you.
- Stay out of puddles – a puddle can hide a large pothole that can damage your vehicle or its suspension or flatten a tyre. The spray of water could splash nearby pedestrians or drown your engine, causing it to stall. Water can also make your brakes less effective.

Under these and other adverse conditions the driver has to deal with reduced visibility and traction, steering, braking and skid

control. It is best to practice how to deal with this conditions in a safe, secluded area. The driver who knows what to do in an emergency is more likely to stay in control.

### **While driving in adverse conditions:**

#### **1. Be Cautious**

- Get in the right frame of mind before you start driving. Travel with another person so that the responsibility of driving is shared.

#### **2. In the driver's seat**

- Adjust your seat correctly to enable you to perform manoeuvres properly. This also reduced the risk of injury to fingers, elbows and the chest. Fasten your safety belt.

#### **3. Dress appropriately**

- Wear clothes that are comfortable and also provide freedom of movement. Heavy garments can restrict movement behind the wheel. Stop in a safe spot before removing a coat or gloves.

### **Poor visibility**

Keep your windshield and windows clean. Clean the inside of your windows at least once a week. Use your defroster to keep front and rear windshields clear. On a cold day, move the heat control to "hot" and let the engine warm up before you turn on the defrosters and blowers. This will prevent moisture from collecting on the inside of the glass.

When the glass gets foggy, open a window slightly and turn the defroster fan to a higher speed. Use your air conditioner to reduce humidity. Mud and dust on your headlights can reduce the illumination by 90 per cent. Stop periodically during long trips and clean your headlights. If your vehicle is not equipped with daytime running lights, drive with your low-beam headlights on at all times - especially on dark or overcast days. Use low beams and fog lights in fog.

## **Reduced Traction**

Wet roads mean poor traction. Conditions are most dangerous during the first 10 minutes of a heavy downpour as oil and debris first rise up, then wash away. Knowing how to handle poor traction reduces the potential for hydroplaning, skidding or getting stuck in the mud.

### **Getting out of a tough spot**

You need steady pulling and moderate power when traction is poor. The best remedy when wheels are stuck in the mud or a soft shoulder is to apply power slowly.

- Keep the wheels pointed straight ahead so the vehicle can move in a straight line. If you can't go forward, try backing out, steering in the vehicle's tracks.
- With a manual transmission, start in second gear to prevent wheel spin. Accelerate carefully, giving enough fuel to prevent the engine from stalling and ease along gradually until traction improves.
- Rock your way out by using second gear in a manual transmission and low gear in automatic transmissions. Check your owner's manual for recommended procedures. Move forward until the vehicle stops, then shift into reverse and move backwards until momentum stops. Repeat this process, moving ahead a little more each time. Use minimum power to keep the wheels from spinning and digging in deeper.
- If rocking doesn't work and wheels simply spin, find a way to create traction. Traction mats, gravel or kitty litter work best, but you can also use salt, burlap, branches or even the vehicle's floor mats. Shovel a space in front of the drive wheels and spread your materials there. Apply power slowly, using second or low gear.

### **Steering clear of collisions**

You may need to take evasive action in poor weather to avoid a collision. Steering around an obstacle is preferred to braking at speeds above 30 km/h because less distance is required to steer

around an object than to brake to a stop. In wet weather, sudden braking often leads to skids.

**There are two acceptable methods of emergency steering:**

1. The push-pull method of steering is performed by shuffling your hands, so that neither hand crosses over the imaginary line between 12 and 6 o'clock. Since the arms never cross, you are able to provide continuous adjustments in either direction.
2. The fixed-hand steering method allows rapid 180-degree steering to either direction, but it has one shortcoming. This method is confining in that your arms may get locked together as you attempt to steer past 180 degrees, leaving you in an awkward position to make further fine adjustments.

**Braking**

Stopping on a slippery surface requires more distance, so increase your following distance. Focus your attention as far ahead as possible - at least 20 to 30 seconds.

Anti-lock braking systems (ABS) are designed to prevent wheels from locking and to retain steering control during panic braking. Sensors located at wheels detect lock-up. The anti-lock system relieves pressure as needed, allowing all four wheels to continue to turn while maintaining steering control.

You should use the "plant and steer" method with antilock brake systems. Do not remove your foot from the brake or pump the pedal. If you apply pressure and the wheels lock momentarily, you might feel the brake pedal pulse back against your foot. This is normal. Just hold the brake pedal down and steer. Pumping the pedal actually works against the system.

The best way to stop on a slippery surface if your vehicle doesn't have antilock brakes is to use threshold braking. Keep the heel of your foot on the floor and use the ball of your foot to apply firm, steady pressure on the brake pedal to the "threshold" of locking your brakes.

If your heel leaves the floor, the wheels could lock because control of the brake pedal is transferred from your ankle muscles to your thigh

muscles, which are not capable of the finer control required in this situation.

Under the stress of trying to stop quickly, drivers almost inevitably use too much pressure, resulting in locked wheels (on non-ABS-equipped vehicles). If this happens, release pressure on the brake pedal by one or two degrees, then immediately reapply slight pressure. Continue this technique as needed until the vehicle comes to a stop.

### **Dealing with a crisis**

When visibility is so limited that you can't see the edges of the road or other vehicles at a safe distance, it's time to get off the road and wait for the rain to ease up. It's best to stop at a rest area or exit the freeway and go to a protected area. If the roadside is your only option, pull off the road as far as you can, preferably past the end of a guardrail. Vehicles parked at the side of the road are frequently struck by other drivers. Respect the limitations of reduced visibility and turn headlights off and emergency flashes on to alert other drivers.

## UNIT 15: PREVENTIVE MAINTENANCE

**Preventive Maintenance (PM)** refers to the different types of work done to ensure that the vehicle is in good working condition and that any problems can be detected and fixed before they get out of hand. Preventive maintenance may include the following:

- Vehicle inspection.
- Lubrication.
- Adjustment.
- Cleaning.
- Testing of certain parts.
- Repair and replacing worn out parts.

**Driver's obligation:** As the owner and/or driver of a vehicle it is important to carry out regular preventive maintenance as this increase the availability and safety of the vehicle.

- PM maintenance should be scheduled on a regular basis based on the specific part of the vehicle being maintained.
- The driver of the vehicle should participate in this maintenance work as ultimately he or she is the one who makes the decision as to whether the vehicle is safe to drive, clean enough or if the vehicle needs further repair or maintenance work done.
- To determine how regular PM should be undertaken the driver should also look at the vehicle manufacturer's guidelines.
- It is important for every driver to know some of the basic steps to take in the event that the vehicle malfunctions.

**Below is a table indicating common issues and how to resolve them.**

Problem	Symptom	Solution
<b>Tyres/Steering</b> Heavy steering Vibrations in steering at specific speeds	<ul style="list-style-type: none"> <li>Puncture</li> <li>Power assisted steering fault</li> <li>Bulge in tyre or front wheelout of balance</li> </ul>	<ul style="list-style-type: none"> <li>Change the wheel</li> <li>Seek qualified assistance</li> <li>Change the tyre or seek qualified assistance</li> </ul>
<b>Brakes</b> <ul style="list-style-type: none"> <li>Vehicle pulls to one side when braking</li> <li>Warning light shows</li> </ul>	<ul style="list-style-type: none"> <li>Incorrect adjustment</li> <li>Undue wear in pads</li> <li>System fault</li> <li>Low brake fluid</li> <li>Possible component failure</li> </ul>	<ul style="list-style-type: none"> <li>Seek qualified assistance</li> <li>Seek qualified assistance</li> <li>Check level</li> <li>Seek qualified assistance</li> </ul>
<b>Lights</b> <ul style="list-style-type: none"> <li>Lamp does not light</li> <li>Indicator flashing irregularly</li> <li>Main/dip not lit</li> </ul>	<ul style="list-style-type: none"> <li>Bulb failure</li> <li>Fuse failure</li> <li>Possible bulb failure</li> <li>Part failure of unit</li> </ul>	<ul style="list-style-type: none"> <li>Check and replace</li> <li>Check and replace</li> <li>Check and replace</li> <li>Check and replace</li> </ul>
<b>Engine</b> <ul style="list-style-type: none"> <li>Misfiring or won't run</li> <li>Fails to start</li> <li>Starter does not operate</li> <li>Starter or solenoid clicks but does not operate</li> <li>Squealing noise from engine area</li> <li>Overheating</li> </ul>	<ul style="list-style-type: none"> <li>Fuel or electrical fault</li> <li>Defective spark plugs</li> <li>Out of fuel</li> <li>Damp in electrical system</li> <li>Battery flat</li> <li>Starter motor jammed Fan belt loose</li> <li>Fuse blown on electric cooling fan</li> <li>Loss of coolant Fan belt snapped</li> </ul>	<ul style="list-style-type: none"> <li>Examine connections</li> <li>Seek assistance</li> <li>Refuel</li> <li>Examine and replace if necessary</li> <li>Check gauge</li> <li>Change battery</li> <li>Jump start</li> <li>Push start</li> <li>Rock vehicle backwards forwards in gear</li> <li>Adjust and replace and</li> <li>Replace fuse</li> <li>Tape hose for temporary repair</li> <li>Replace belt</li> </ul>

## **UNIT 16: CONDITIONS OF CARRIAGE**

**Conditions of carriage refer** to customers' rights and the restrictions on these rights. It also refers to the driver's obligation to customers and their obligations when handling cargo. The Traffic Act provides guidelines for conditions of carriage for different categories of goods and passengers.

**A commercial vehicle** is a motor vehicle constructed or adapted for the carriage of goods or burdens of any description in connection with any trade, business or agriculture. Therefore, a light vehicle can be licenced as a commercial vehicle. Light vehicles licenced to be Public Service Vehicles (PSV) should do the following:

- Provide a statement of liability.
- State what fares or ticketing prices will be charged.
- Indicate if there are any exceptions with fare prices.
- Ensure that you abide by a code of conduct that customers can easily rely on as a guideline.
- Ensure that you address restricted items. Provide outlines for customers to know what items are restricted and which are Lost property.
- Contact details of the owner or company that runs the service.

## UNIT 17: HAZARDOUS MATERIALS

**Hazardous Material** is any material prescribed as such by any written law and includes explosives, petroleum products and any material involving high risk. Hazardous materials are solids, liquids, or gases that are harmful to people, other living organisms, property, or the environment. They are often subject to chemical regulations.



### Characteristics of Hazardous Goods

Hazardous goods are known for the following characteristics:

- Flammable; something that can burn easily.
- Corrosive, something that rusts or decomposes.
- Reactive; something that can explode.
- Toxic; something that is poisonous.

Before handling hazardous material, the driver is required to get legal approval that requires special equipment and different alterations to the vehicle to make it suitable for transporting any of these materials.

**Hazmat Endorsement Framework** is an assessment process for any driver seeking to obtain, renew and transfer a hazardous materials endorsement on a commercial driver's license.

### Classification of Hazardous Materials

There are nine classes of hazardous materials. These are:

- Explosives.
- Gases.
- Flammable Liquids.
- Flammable Solids.
- Oxidizing Substances.

- Toxic and Infectious Substances.
- Radioactive Material.
- Corrosives.
- Miscellaneous Dangerous Goods.

Each class of hazardous material has a prescribed procedure for loading and offloading that the driver should adhere to.

In Kenya, the Kenya Bureau of Standards (KBS), National Environmental Management Agency (NEMA) and NTSA co-ordinate licencing for transportation of hazardous goods.

**Do not handle hazardous material unless you have the appropriate licencing to do so.**

## **UNIT 18: EMERGENCY PROCEDURES**

The driver should always be prepared to handle any emergencies that may occur within or outside the car.

Many of these situations can be avoided by ensuring that the passengers and driver take the prescribed safety precautions before embarking on the journey. This section will address the most frequent emergencies.

### **Basic Responsibilities at a Scene of Crash**

Crashes frequently occur on the carriageway due to error or negligence by different road users. If you are involved in an accident or if you witness an accident, you should stop and offer assistance where possible.

These are the steps that should be taken in the event of an accident.

- Set up the reflector triangles behind and in front of the crash site. The reflector triangles should each be 50 metres behind and ahead the vehicle.
- Call for emergency services – the police, ambulance and fire brigade - immediately, providing full details of the incident location and any casualties.
- Move uninjured people away from the vehicles to safety.
- DO NOT move injured people from their vehicles unless they are in immediate danger from fire or explosion.
- Do not remove a motorcyclist's helmet unless it is essential to do so.
- Be prepared to give First Aid.
- Stay at the scene until the police arrive.
- If you are involved in any other medical emergency on the road, you should contact the emergency services in the same way.
- In the event of spillage, keep onlookers away from the scene of the accident and wait for police to handle the situation.

## **First Aid**

Many road crash victims suffer unnecessarily, or even die, at the scene of the crash due to inadequate care. Someone with First Aid training can often prevent a victim's condition from worsening and may save their life. The aims of First Aid are to:

1. Preserve life.
2. Prevent a casualty's injury or illness from getting any worse.
3. Promote recovery.

You can get First Aid training at places such as Red Cross and St. John's Ambulance. But even if you do not have First Aid training there are simple things you can do to help the injured, and these are described below.

### **1. Prevent further danger and make safe**

First of all assess the danger to yourself, the victims and others. Make the situation safe before approaching. You do not want to become a casualty yourself. For instance, warn and control approaching vehicles to prevent a second collision. Ask other people to help you with this. If there is a danger of fire, make sure no one smokes or uses lighters or matches.

### **2. Emergency treatment**

The most important thing is to preserve life. Remember "Dr A.B.C." This stands for:

#### **D = Danger:**

Is there continuing danger to the injured? Try to make safe. Protect the casualty and keep curious onlookers away.

**R = Response:** Is there any response from the casualty? – Shake the casualty gently and talk to him. If there is no response check the airway (throat).

#### **A = Airway:**

Is the airway (throat) clear? Lay the casualty on his back, tilt the head to one side, and open the mouth; check that the tongue is not blocking the throat, and use your fingers to scoop out anything (food, dirt, artificial teeth, etc.) in the mouth; then gently move the

head so that the chin is up and the mouth open and check for breathing.

### **B = Breathing:**

Is the casualty breathing?

Check by putting your ear close to the casualty's mouth for at least 10 seconds to hear and feel the breath. Look to see whether the chest is rising and falling. If there is no breath, then immediately give artificial respiration by pinching closed the nostrils, taking a deep breath, and breathing slowly into the casualty's mouth until you have emptied all the air in your lungs into his. Do this again. Check again for breathing. If there is still no breath, check for circulation.

### **C = Circulation:**

Is there a pulse? Check the pulse by placing two fingers at the neck near the throat, and look at the casualty's colour and pupils of the eyes. If there is no breath or circulation, call for emergency assistance immediately before continuing. Once help has been summoned, if you know the technique, then apply CPR (Cardio-Pulmonary Resuscitation) combining chest compressions with artificial respirations until expert help arrives, or the casualty starts breathing. If there is a pulse, but the casualty is still not breathing, continue with artificial respiration (a breath every five seconds). Do not give up - it may take some time for him to be able to breathe on his own. Once the casualty is breathing and talking again, lay him on his back and keep him warm.

If he is breathing but does not answer questions, put him in the recovery position.

### **3. Get help**

Expert help must be summoned as quickly as possible, normally by dialing 999. Try not to leave the casualty alone, so ask others to phone or get help and to report back that they have done so. Many people have mobile phones so there may be no need to leave the scene. It is important to give the emergency services clear information on:

- What has happened.
- The location of the crash; street name, known landmarks or

places.

- Site conditions and dangers.
- Number of people injured and severity of injuries. You should not end the call until you are told to do so – wait for the emergency service to confirm the details.
- If help is not quickly available you may have to transport the casualty to a medical facility. Ask the advice of the Police or local people about the best place to take the casualty. Small facilities like health posts and clinics may be able to stabilize the condition of the seriously injured so that they will survive a long trip to hospital. However some may not be open 24 hours.

#### **4. Moving casualties**

- Do not move any casualties unless absolutely necessary. Injured persons still in vehicles should not be removed unless there is immediate danger of fire, additional damage, or further collisions. Persons suffering obvious bone fractures or possible internal or spinal injuries should not be moved unless it is essential for their safety.
- If a casualty is unconscious but is breathing and not obviously badly injured, put them in the recovery position to prevent breathing problems.

#### **5. Bleeding and injury treatment**

- A person can bleed to death in five minutes, so it is vital that you try and stop heavy loss of blood. Reassure him, and, if possible, lay him flat on the ground. Find out where the bleeding is coming from. Then check for anything in the wound and remove it if is easy to do so. Apply firm pressure over the wound, preferably using a sterile dressing from a First Aid kit or any other.
- Clean padding - otherwise use your hands. If the bleeding does not reduce, press harder. You may be able to tie the padding over the wound, but be careful that you do not cut off circulation - release the pressure briefly every ten minutes. If there are no broken bones, raise a bleeding limb as high as

possible to reduce the blood flow.

- If there are broken bones, fractures or dislocations it is important to stabilize the limb and avoid movement so you don't make the injury worse. If there are burns, immediately cool the area with cold running water and then cover with a clean dressing.

## 6. Treat victims for shock

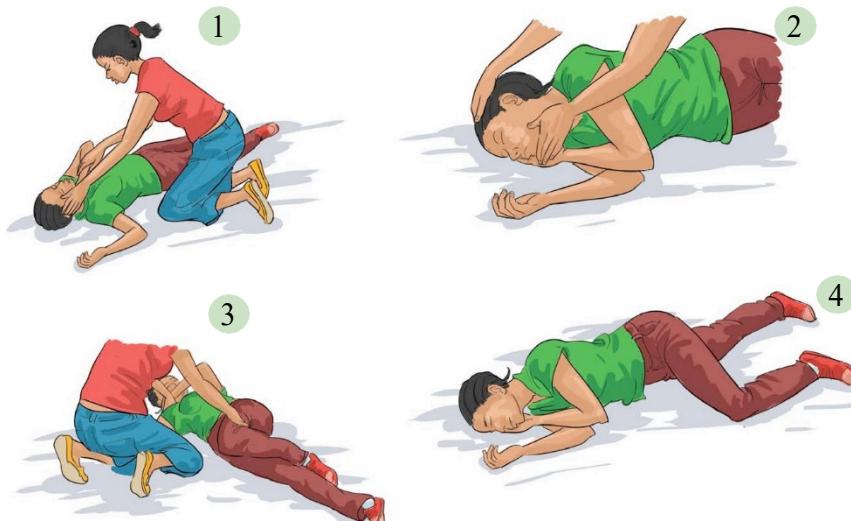
- It is also very important to recognize, prevent, and treat the symptoms of shock, as these may cause even more serious deterioration than the original injury. The signs are: a cold, pale, damp skin; fast or weak pulse; rapid shallow breathing; feeling sick; yawning or sighing.
- The causes of shock are many, including: injury; drop in blood pressure; and reduction in the volume of any body fluid. As well as treating the cause, it is vital not to leave the person alone, and to make them more comfortable by:
  - (i) Laying the person down.
  - (ii) Loosening any tight clothing particularly round the chest and airways.
  - (iii) Keeping the person warm by covering with a blanket.
  - (iv) Talking to the person to keep them calm.
  - (v) Raising the legs slightly to keep blood flowing to the head.

- An accident casualty should never be given anything to eat or drink. If they are thirsty, moisten their lips with water. Never give a casualty any medicines or apply anything but clean water and dressings to wounds.

## 7. Put the casualty in the recovery position

- This is a stable position with the casualty on their side, to prevent choking on their tongue or vomit if unconscious.
- The head is slightly tilted back, the lower arm is out at a right angle, the hand of the upper arm is under the cheek, the lower leg stretched out, and the upper leg bent in a right

angle as shown in the illustration below.



### Reporting the accident

- Report the accident as soon as possible to the police.
- If you are hired as a driver, also report the incident to your employer.
- Take a photo or sketch the accident scene if you can do so safely.
- Record the number plate of the vehicles involved in the accident.

## **UNIT 19: WORK PLANNING**

Work Planning ensures that the driver and the customers both get the best out of the service provided because it allows the driver to prepare both physically and psychologically before the journey, schedule maintenance work in advance, schedule any stoppages during the journey and arrive at the intended destination on time.

### **Preparing for the Journey (Trip Planning)**

If the journey involves transportation of goods, then the driver should pick up the goods and get all the appropriate documentation. This may include:

- Name, address, phone and directions of the sender.
- Pick-up phone number.
- Appointment time for collecting and delivering the goods.
- Requirements for securing the load e.g. if it is fragile.
- Other legal requirements if the goods are classified as Hazardous Material or if the goods are being transported outside the country of origin.

### **Managing the trip**

While travelling, the following are factors will affect your how you manage your trip.

#### **1. Distance to be travelled**

- The longer the distance you travel the more preparations you will need to make. You may need a co-driver to take over from you if the distance being travelled is long.

#### **2. Time/Traffic conditions during the journey**

- If you travel during peak traffic hours your journey is likely to be longer.
- Travelling at night or early in the morning when there is limited visibility also affects you travel.
- It is best to plan ahead and choose the most convenient travel time for you.

#### **3. Meals**

- Plan ahead for where you will stop for meals.
- If using familiar roads then go to place you are familiar with.

- If you are using an unfamiliar route, it is best to plan ahead by using maps which can assist you in planning for where to stop.

#### **4. Fatigue**

- Do not start a journey when you are tired.
- If you feel tired during the journey, stop the vehicle at a convenient stop and get some rest and fresh air before proceeding on your journey.

#### **5. Adverse weather conditions**

- Avoid driving in adverse weather conditions.
- Take the right precautions if you get caught up in these conditions.

### **Managing Time**

To get to the intended destination within the least possible amount of time get directions before starting the journey. You can do this by consulting maps, GPS units and other drivers. Ensure that you know alternative routes so that you have options in case of road restrictions.

### **Legal limits on Duty hours /Driving hours**

The driver is obligated to adhere to the rules in the Traffic Act. It is illegal to force a public service driver work for more than the designated hours provided.

#### **The Traffic Act indicates that**

"66A. (1) No person shall drive a public service vehicle or a commercial vehicle for more than a total of eight hours in any period of twenty-four hours.

(2) Any person who contravenes or fails to comply with subsection (1) shall be guilty of an offence and liable —..."

#### **Completing records of duty, work tickets or trip cards.**

After completing the journey, the driver of a public service vehicle should provide a summarized record of the trip.

## **UNIT 20: CARGO HANDLING**

### **Cargo Securement**

Cargo securing also known as load securing is the securing of cargo for transportation.

As a driver you are responsible for getting cargo to its destination in good condition and without risk to other road users and the general public. This means that it must be correctly loaded and secured firmly in the vehicle.

You are also responsible to see that the vehicle is not overloaded, that the weight of the cargo is properly distributed and that the cargo is properly secured.

Cargo that is being transported in a vehicle should always be secured. When brakes are applied in a moving vehicle, an insecure load shifts forward and this creates the following risks:

- Injury of passengers or the driver.
- Loss of cargo.
- Damage to the cargo.
- Damage to the vehicle.
- Loss of life.
- Crashes as a result of vehicle instability.

Cargo is secured to prevent the load from shifting during the journey. This must be done using the right procedures and securing components to prevent damage to the cargo.

Cargo should be secured so that it does not leak, spill, blow off the vehicle, fall off the vehicle, fall through the vehicle or shift within the vehicle to the extent that it causes vehicle instability.

**An effective securement system must be able to withstand the following forces;**

- **Forward force:** caused when braking when driving in a straight line.
- **Rearward force:** caused when accelerating, shifting gears while climbing a hill, or braking in reverse.

- **Sideways force:** caused by the cargo weight when turning, changing lanes or braking while turning.
- **Upward force:** caused when travelling over bumps or uphill.

## **Safe Loading and Unloading**

Ensure that you have the correct vehicle. Before undertaking to transport any cargo you must have a vehicle suitable to handle the type of cargo to be transported and enough load capacity.

### **Loading the Cargo**

- The vehicle should be fitted with a loading rack, headboard and other fittings necessary for carrying the cargo you have.
- Use the appropriate method to load the cargo.
- Spread the load to keep the centre of gravity as low as possible. The centre of gravity of the load should be on or as near as possible to the centre of the vehicle.
- If the cargo is stacked, keep the larger and heavier items at the bottom.
- Whenever you load or unload cargo, redistribute the load, if necessary, to maintain good weight distribution.
- Secure the load using the correct securing components. These components include binder cables, tarpaulin, ropes.
- Extra wide or long projections from the vehicle require special permits.

### **Unloading the Cargo**

- Unload the cargo at the area designated for unloading it. Assigned loading areas are shown using road markings and signage [AM1].
- Ensure that you have sufficient assistance when unloading heavy or fragile goods. Do risk injury and permanent disability by overloading yourself or your assistants.
- Ensure that the area where goods are being loaded or

unloaded is secure enough before starting the exercise.

### **Axle Weight Distribution**

- When loading the vehicle, ensure that it does not exceed any of the legal limits as stipulated in the Traffic Act of Kenya.
- Load limits are specified for each axle and group of axles. These limits are determined by the number of and type of tyres on each axle, and the spacing of the axles.
- Some of these mass limits vary from country to country although in East Africa we are moving towards standard limits. Always be certain that the vehicle is within the limits when you cross country.

### **Legal aspects of loading (EAC Vehicle Axle Load Control Act, 2013)**

The practice in Kenya is that vehicles are weighed in three aspects as provided under the Traffic Act, Cap. 403.

- Axle Overload.
- An Axle Group Overload; and
- Gross Vehicle weight Overload.

The regulation set the maximum allowable single axle load limit of 10 tons and a maximum gross vehicle mass of 56 tons. Conformity involves compliance to both Axle Load and Gross Vehicle Weight.

The EAC Vehicle Load Control Bill passed in May 2013 harmonizes the GVW limits to 56 tons. Measurement is based on axle load with maximum for single axle =10 tons, tandem=18 and tridem=24 tons.

N/B: Kenya increased its GVW limit from 48 tons to 56 tons based on the EAC vehicle Load Control Bill.

<b>Country</b>	<b>Single Axle (Non- steering)</b>	<b>Two Axle Unit (Tandem)</b>	<b>Three Axle Unit (Tridem)</b>	<b>Gross Vehicle Weight</b>
Angola	10	16	24	38
Botswana	8.2	16.4	24.6	50.2
Malawi	8.2	16.4	24.6	55.0
Mozambique	10	16	24	38
South Africa	9	18	24	56
Tanzania	10	18	24	56
Zambia	10	16.3	23	.
Zimbabwe	8.2	16.4	24.6	55
AVERAGE	9.2	16.7	24.1	53.6
Kenya	10	18	24	56
COMESA	10	16	24	53

\* GVW in Angola and Mozambique are regarded as "outliers" and are not included in the average

## **Terms and Definition**

**Axle load** - the sum of the wheel weight loads of all wheels on any axle.

**Axle Group** - any number of axles which for the purposes of transferring load to the road pavement act in unison or together.

**Gross Vehicle Weight** - in relation to a motor vehicle, means the maximum permissible weight of such vehicle and its load under this Act.

**Weighing Station** - a check point or installation along the Regional Trunk Road Network for weighing vehicles and includes all facilities found therein.

**Weighbridge** - a machine for weighing vehicles under this Act, including all its associated peripherals and software.

**Overload** - means an axle load, a load from a group of axles, or gross vehicle weight on a vehicle that exceeds the prescribed legal limits for the vehicle or for any particular part of public roads.

**Unstable Load** - a load on a vehicle which could shift or oscillate within the vehicle when it is moving or stationary.

**Super Load** - a load, which by its nature is indivisible and the weight of which exceeds the authorized weight of the vehicle on which it is to be loaded.

**Legal Load Limit** - the weight that may be borne by a single axle, an axle group, or all the axles of a vehicle as specified in the Second and Third Schedules.

**Hazardous Load** - any load which has been prescribed by the Council in the Gazette to be capable of posing risk to health, safety, and property when transported along the Regional Trunk Road Network.

## **Cargo Movement documentation**

Whenever you are in charge of the cargo in transit, make sure that all details pertaining to potential cargo are documented. Do not leave details to memory; document at the time of loading and the unloading.

## **Definition of Terms**

To fully grasp the basics of completing cargo documentation and the bill of lading you should be familiar with a series of definitions.

**Carrier** — an individual or company in the business of shipping goods.

**Shipper (consignor)** — the individual or company originating the order for transport of goods. Be aware that sometimes the shipper may not be the point of origin. It may be a warehouse that contracts on behalf of your shipper.

**Receiver (consignee)** — the individual or company to whom the goods are shipped or consigned. Sometimes the consignee is not your destination. It may be someone contracting on behalf of the consignee.

**Freight broker** — an individual or company who arranges, for compensation, the truck transportation of cargo belonging to others, utilizing authorized for-hire carriers to provide the actual truck transportation. A broker does not assume responsibility for the cargo and usually does not take possession of the cargo.

**Freight forwarder** — an individual or company that accepts small shipments from various shippers and combines them into one larger shipment.

**Originating (pickup) carrier** — the carrier who picks up a shipment from a shipper.

**Connecting carrier** — the carrier who delivers a shipment to an interchange point where goods are then transferred to another company to continue shipment.

**Terminal carrier (agent)** — the carrier who delivers the shipment to the consignee.

## **Pickup and Delivery procedures**

When picking up or delivering cargo, please take note in advance of the:

- Delivery and Pick up timelines/ schedules.
- Venue of the pickup station.

- Designated parking area when picking or delivering cargo.
- Nature , size and weight of the cargo.
- All the above conditions should be in tandem within the stipulated regulation.

## **UNIT 21: CUSTOMER CARE**

**A customer** refers to anyone that you have to deal with in the course of riding or driving on the road. In this case, the customer may be a pedestrian, a passenger and other motorists.

**The following are essential skills any driver should have:**

- Communication skills.
- Handling customer expectations.
- Handling customers with special needs.
- Knowledge of sexual harassment and other forms of discrimination.

### **Communication Skills**

**Communication** is the process of using words, sounds or behaviour to pass on information. Communication is necessary for all road users as it allows for shared and safe use of the road with minimal disruption. It is important to know and understand how other road users communicate so as to ensure safety and harmony along the road.

#### **Why you need to train on communication**

The traffic situation brings together different types of road users – pedestrians, cyclists, riders and other motorists – and also different types of individuals with varying personalities and varying needs. As such it is not enough to know the rules of the road. It is also important to learn how to interact with different types of individuals.

The following are some elements of communication that every road user should learn:

- Patience.
- Attitude.
- Language.

#### **Courtesy on the road**

Courtesy involves applying all the elements of good communication - patience, having a positive attitude and using appropriate language.

- Ensure that you get the right training and a license before you venture out on the road.
- You should always apply all road safety techniques as required for safe driving.
- Having a positive attitude enables you to complete tasks with confidence and to respond appropriately to instructions or signals from the authorities, road signals and other road users.
- Take responsibility for your actions when you are on the wrong. In the event that you are involved in an accident. Do not take the law into your own hands. Report the matter to the police.
- Be visible by positioning yourself correctly on the road and signalling where necessary.
- Ensure that your vehicle interior and exterior is clean, that the number plates are visible and that your passengers have comfortable seating and use their safety belts at all times.
- Ensure that you store away luggage in the boot.

### **Handling Customer Expectations**

The driver or rider should always prioritize their safety by ensuring that they observe all the correct safety procedures. This section primarily addresses the needs of customers who are paying for the service as passengers or owners of goods that need to be transported but all these guidelines can also be applied to private motorists and motorcycle riders who are ferrying goods or passengers.

#### **Before embarking on any trip ensure that you:**

- Pick and drop off passengers or goods at the appropriate and designated points.
- Provide sufficient time for passengers to board and alight from the vehicle. Be patient, do not rush them.
- Assist passengers who may need help in embarking and disembarking from the motorcycle.

- Address customers in respectful language so that there is less room for misunderstanding.
- Be professional: This means giving clear information about the service you provide, the charges and any other detail that would ensure that you, the service provider, and the customer have clear expectations.
- Provide a helmet and reflective jacket for your passengers.
- Let your passengers know how to correctly position themselves on the motorcycle.
- Provide appropriate sitting for all passengers.
- Where possible, and in particular for the PSV, ensure that you designate sitting for the elderly, sickly, and expectant mothers. Make arrangements for them to access seats that are most convenient for easy boarding and alighting. Give special consideration for passengers with disabilities and offer assistance where requested.
- Do not carry more passengers or goods than you are legally allowed to ferry.
- Know the weight restrictions related to your vehicle or motorcycle. Do not exceed this.
- Ensure that you are appropriately equipped to handle the goods to be ferried from one location to another.

### **Observe Personal Hygiene**

- Ensure that you are smart, sober and clean. Provide a clean environment for both you and your passengers to work and travel comfortably. Your personal grooming projects your level of confidence, your attitude towards your work and it ultimately affects how you interact with your customers.
- Ensure that your vehicle or motorcycle is kept clean. Ensure that your number plates are visible and that your safety gear is also kept clean. This allows you to communicate effectively on the road; to see and be seen.

## **Time and Stress management skills**

- Ensure that your passengers or goods are ferried within the expected time. Where unexpected circumstances cause a delay, let your customer know.
- Get sufficient rest and nutrition so that you are strong and healthy enough to ride your motorcycle.
- Take breaks between journeys and only work within legally stipulated hours so that you, your passengers and goods are safe from the risk of accidents caused by fatigue

## **Sexual Harassment and Discrimination**

### **Sexual Harassment**

This is a form of bullying or coercion which happens when a person directly or indirectly makes unwelcome requests for sexual intercourse, sexual contact, other sexual activity, uses written or spoken language of a sexual nature, uses visual material or shows physical behaviour of sexual nature.

### **Discrimination**

Occurs when you chose to treat customers favourably or unfavourably because of their appearance, race, ethnic identity, gender or age.

- Both sexual harassment and discrimination are anti-social behaviours that discourage positive interaction on the road.
- It is important to create a working environment where vulnerable passengers are safe and are less likely to encounter inappropriate behaviour, language or contact.
- Ensure that you have a procedure in place to deal with sexual harassment and discrimination should you encounter it.
- When faced with sexual harassment or discrimination, speak up, address the issue with the administrative authority and seek assistance from the police.

## **Competitive Riding**

This is when motorcyclists ride abreast at unreasonable speed. No more than 2 riders are allowed to ride abreast.

## **Defensive riding is important when in the following condition.**

- Adverse weather conditions such as rain, fog or windy. In these cases, the road surface may change and so you need to apply different techniques to avoid danger.
- Different road conditions that may be difficult to manoeuvre such rough terrain, wet surface or sloping surfaces.

## **Defensive riding techniques**

- Improving observation, anticipation and awareness consistent with the riding speed.
- Applying sound judgement of speed and distance.
- Don't drive when you are tired, rest before any journey.

## **UNIT 22: THE EXAMINATION INSTRUCTIONS FROM NTSA**

### **Provisional Driving Licence (PDL)**

- This is issued to an applicant who wants to undergo training in driving.
- It is endorsed in respect of any class or classes of motor vehicle which if you held a driving licence you would be entitled to drive, in order that you may learn to drive such class or classes of vehicle.
- This licence is valid for three (3) months only but may be renewed for further periods of three months on payment of the prescribed fee.

### **Requirements**

- You shall enrol in a licenced driving school and apply online.
- As a holder of a PDL, you shall not be allowed to drive on a road unless you are in the company of a qualified driver holding a valid driving licence for the class or classes you have been permitted to drive.

### **Driving Licences**

- A driving licence is issued as an authority to allow you to drive a motor vehicle of any class on a road.
- No person shall be allowed to drive a motor vehicle on road unless he is the holder of a valid driving licence or a provisional licence endorsed in respect of that class of vehicle.
- No person shall be entitled to more than one driving licence, but a driving licence may be endorsed to permit the holder to drive one or more classes of motor vehicle in line with curriculum.
- Driving licences shall upon expiry be renewed on production and upon payment of the prescribed fee. The renewal period will either be valid for a period of twelve (12) months or three (3) years from the date of issue at the option of the holder.

### **No driving licence or provisional licence shall be granted to any person:**

- Under the age of sixteen years;

- Under the age of eighteen (18) years, except in respect of motor cycles; or
- Endorsed in respect of matatus and motor-omnibuses, unless he:
  1. Is over the age of twenty-four (24) years; and
  2. Has for not less than four (4) years held a licence endorsed in respect of motor-cars or commercial vehicles.

Any person driving a motor vehicle on a road shall carry his driving licence or provisional licence, and on being so required by a police officer, produce it for examination.

### **Conditions for Granting Driving Licence**

- A licensing officer shall not grant an applicant a driving licence endorsed in respect of any class of motor vehicle unless the applicant satisfies the licensing officer that he has passed a test of competence to drive that class of motor vehicle and that he holds a certificate of competence.
- Is the holder of a valid driving licence for that class of motor vehicle granted by a competent authority in a member country of the Commonwealth, or
- Is the holder of an international driving permit.
- Makes a declaration as to whether or not he is suffering from any such disease or physical disability which would be likely to cause the driving by him of a motor vehicle to be a source of danger to the public.
- Is able to read, with glasses if worn, a motor vehicle identification plate at a distance of twenty-five (25) metres.
- A person who is totally blind or blind in one eye is not allowed to hold a driving licence.
- If it appears to a licensing officer that there is reason to believe that the applicant for any driving licence is suffering from disease or physical disability likely to cause the driving by him of a motor vehicle, of the class or classes in respect of which the application for a licence is made, to be a source of danger to the public, such application may be disapproved unless the applicant.
- Produces a certificate from a medical practitioner stating

that in the opinion of such medical practitioner the applicant is physically fit to drive the class or classes of motor vehicle in question; and

- Undergoes and passes a driving test.
- Indicate other requirements-badge, PSV licence.

### **Test Booking**

- When an applicant is satisfied that he can take a driving test, he shall be required to book for a test stating the date, and time and location he would like to go for the driving test.
- A test booking certificate shall be issued upon payment of the prescribed fee. All driving tests are undertaken at Driving Test Units (DTU) which are based across the country. The driving tests are conducted by driving test examiners (DTE) and shall include a test of the applicant's –
  1. Knowledge of the rules of road;
  2. Knowledge of recognized road signals and road signs;
  3. Knowledge of any authorized road or highway code; and
  4. Physical fitness to drive a motor vehicle of the class for which the licence is required.
- Once an applicant has passed a driving test, he shall be issued with a certificate of competence (C of C) indicating the class or classes of motor vehicle he/she is permitted to drive. The C of C is valid for a period of three (3) months, and upon expiry, it will be at the discretion of the licensing officer to decide whether the applicant will undergo another driving test, or on the contrary approve the application for payment of the driving licence.

