

g
**EXCITING WORLD OF
AUTOMOBILES**



STUDENT WORKBOOK

Curriculum : AUTO-SRV L1-NQ²⁰¹²

Unit : AUTO-SRV L1U4

Road Safety

Vocational Learning Material for Schools

PSS Central Institute of Vocational Education

Bhopal

PREFACE

Improving the parity of esteem between the general academic education and vocational education, is the policy priority of the Government of India. The National Vocational Education Qualification Framework (NVEQF) developed by the Ministry of Human Resource Development (MHRD), Government of India, is a descriptive framework that provides a common reference for linking various qualifications. It will be used for setting common principles and guidelines for a nationally recognized qualification system covering Schools, Vocational Education and Training Institutions, Technical Education Institutions, Colleges and Universities. The NVEQF will act as a translation device to make qualifications more understandable to employers, students and institutions. It will promote transparency of qualifications and facilitate learner's mobility between different qualifications, thus encouraging lifelong learning. PSSCIVE has taken lead in development of learning material for the Automobile Sector for all level in collaboration with the Automobile Skill Development Corporation (ASDC).

The present material contains activity related to Level L-1 for the Automobile service sector. This will fulfill the needs of the students willing to learn activities relating to the Automobile Service Sector. Any student/ entrepreneur willing to start an Automobile Service Sector can acquire the desired competencies with the help of this book.

The book has been written by experts but reviewed by all the members of the group. I am grateful to the authors for the development of this book and to the members of the Working Group for their candid suggestions, during the development and review. Their names are given elsewhere.

I appreciate efforts put in the by Dr. Saurabh Prakash, as the Project Coordinator of the Working Group in planning and organizing Meetings which led to the final form of this title.

I shall be grateful to receive suggestions and observations from readers, which would help in bringing out a revised and improved version of this book.

Bhopal
June, 2012

Prof. R.B. Shivagunde
Joint Director
Pandit Sunderlal Sharma
Central Institute of Vocational Education

© Ministry of Human Resource Development 2012

Copyright protects this publication. Except for purposes permitted by the Copyright Act, reproduction, adaptation, electronic storage and communication to the public are prohibited without prior written permission.

This student workbook was developed, with active involvement of Automobile Skill Development Council (ASDC) keeping in view the National Occupation Standard (NOS) for Service Technician L4 developed by ASDC.

This project for development of the student workbook was coordinated by the PSS Central Institute of Vocational Education, a constituent unit of National Council of Educational Research and Training, which is under Ministry of Human Resource Development, Government of India.

Student Details

Student Name: _____

Student Roll Number: _____

Batch Start Date: _____

Contents

About this workbook.....	5
Unit information.....	6
Elements and performance criteria.....	7
Relevant knowledge and skills.....	8
Assessment plan.....	8
Introduction	9
Session 1: Importance of Road Safety	10
Relevant Knowledge:.....	10
Exercise.....	13
Assessment Activities	14
Checklist for Assessment Activities.....	14
Session 2: Safe and Responsible Driving.....	15
Relevant Knowledge:	16
Exercise.....	18
Assessment Activities.....	19
Checklist for Assessment Activities.....	19
Session 3: Road Signs.....	20
Relevant Knowledge.....	20
Exercise.....	41
Assessment Activities.....	41
Checklist for Assessment Activities.....	41
Session 4: Driving rules and Registration.....	42
Relevant Knowledge.....	43
Exercise.....	44
Assessment Activities.....	45
Checklist for Assessment Activities.....	45
Session 5: Driving License	46
Relevant Knowledge.....	46
Exercise.....	48
Assessment Activities.....	49
Checklist for Assessment Activities.....	50
Suggested Readings.....	50
Contributors to the Workbook Development.....	51

About this Workbook

This workbook is to assist students with completing the Auto Sector **L1U4-NQ2012** unit of competency: **Road Safety**. Students should study the workbook in class or in their own time.

This workbook contains sessions for imparting knowledge & skills on various elements of the unit. The workbook also includes information, exercises, and assessment activities. The assessment plan has been included in the workbook to assist you in scheduling your time for completing the assignments. Each assessment activity is followed by a checklist for meeting the assessment criteria. The criteria will help you to ensure that you have fulfilled all of the assessment requirements to receive a 'competency' grading/Certification by ASDC.

Unit Information

Unit name: Road Safety

Unit code: Auto L1U4-NQ2012

Unit descriptor:

This unit provides the introductory knowledge & skills covering road safety to be followed in the road and while driving the vehicle. This covers components of road safety such as Importance of safety rules, road signs, traffic signals and rules, driving rules, registration and licensing are covered herewith.

Resource Required:

- Notebooks, Pen, Pencil, Eraser, Computer, Open Source Software for making digital presentation, LCD projector, Sketches, Drawing, pictures, posters of various photographs, animation and videos of various safety measures.

Nominal hours: 25 hours

Elements and Performance Criteria

- Elements define the critical learning outcomes of a unit of competency.
- Performance criteria specify the level of performance required to demonstrate the achievement of the Competency Element.

Element	Performance Criteria
<ul style="list-style-type: none"> • Importance of safety rules and safe practices 	<ul style="list-style-type: none"> • Able to list safety rules to be followed. • Able to use safe practices while driving.
<ul style="list-style-type: none"> • Safe and responsible driving 	<ul style="list-style-type: none"> • Able to list safe and responsible driving
<ul style="list-style-type: none"> • Road Signs and Traffic signals 	<ul style="list-style-type: none"> • Able to identify various road signs traffic signals and describe rules • Able to make sketch of various road sign, traffic signals and describe rules

Relevant Knowledge and Skills

1. Relevant Knowledge

Importance of safety rules,
Safe driving, Road signs,
Traffic signals and rules,
Driving rules,
Registration and licensing.

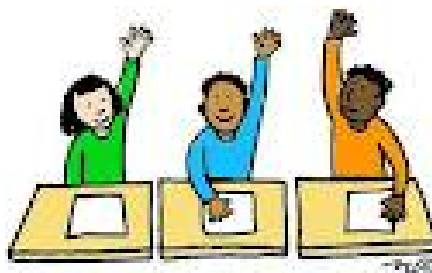
2. Skills

Able to describe about:

Importance of safety rules,
Practice of safe driving
Road signs,
Traffic signals and rules,
Driving rules,
Registration and licensing.

Assessment Plan

Session No.	Assessment method	Due Date	Completion Date
1.	Fill in the Blanks		
2.	Fill in the Blanks		
3.	Fill in the Blanks		



Introduction

All of you must have seen some road accident in which people lose their life. India has a very high number of accidents on the road. In recent years there is some improvement in this area. However, with rapid increase of vehicles on the road the traffic conditions are under a lot of pressure.



Fig : Road Accident

Therefore, road safety is one of the nation's most serious public health issues. It has an impact on everyone, whether you drive, walk or cycle. We should take care of ourselves and respect others on the road.

What is Road Safety:

Road safety refers to methods be adopted by everyone while using roads. These safety methods are meant for reducing the risk of accidents and injuries or casualties on the road. These rules must be followed by all users of roads including pedestrians, cyclists, and motorists, bus & truck drivers. Safety methods also relate to the construction, layout of roads as well as traffic regulation systems. So we can summarise that road safety involves various aspects including:

- The design of roads and highways,
- Laws pertaining to traffic and vehicles,
- Systems of traffic safety and control,
- Driver education,
- School student's education about road safety
- Mass education about road safety
- Traffic and road safety signs,
- Vehicle design,
- Motor vehicle safety inspection and maintenance

Actually it is not difficult to keep our roads safe. Imagine that everyone follows simple safety measures and traffic rules. In that situation there will not be any accidents.

In this Unit, you will develop an understanding of the various types of road safety measures to be adopted. You may understand Importance of safety rules, road signs, traffic signals and rules, driving rules, registration and licensing adopted in our country.

Session 1: Importance of Road Safety Relevant Knowledge

Road Safety

Many studies have shown following major causes of road accidents are as follows:

- Highway safety
- Driving in drunk condition.
- Driving in sleepy condition
- Using cell phone while driving
- Over speeding / rash driving
- Driving in wrong lanes
- Turning without giving signal
- Overtaking from wrong side

It can be seen that Road Safety is a collective responsibility. Therefore each one of us has to take steps required of us:

Government and Public Sector

To develop stricter road safety polices
Generate/ Create funds for road safety awareness
Stricter enforcement by government
Building of better roads and highways.

Role of General Community

Acceptance of Road Safety Rules, Regulations and Policies
Participation in Road Safety Awareness Drives to enhance their knowledge on Road Safety

Education Sector

Inclusion of Road Safety modules in school curriculum
Impart Road Safety education with the help of experts in this area
Impart effective Driver Training for learners as well as existing drivers

Role of Media

Communicate road safety messages through print and electronic media
Support Road Safety initiatives through responsible and objective reporting

Role of Health Professionals

Strengthen Trauma facilities in our country
Organize workshops for saving the lives of people in road accidents

Improvement in Infrastructure

Adopt effective and safe traffic management measures while planning designing of infrastructure. For e.g. Proper road design, design of overbridges, road signages etc

Hurdles in Road Safety

Negligence of Civilians:

Pathetic Condition of roads:

Unsafe Vehicle Design:

Under implementation of Road Safety Standards:

Lack of Emergency Services:

Important Schemes administered by Road Safety cell are:

- Publicity Programs
- Grants-in-aid to Voluntary Organizations for organizing road safety programs
- National Highway Accident Relief Service Scheme
- Refresher Training to Heavy Vehicle Drivers in Unorganized Sector
- Setting up of Model Driving Training school
- Within the M.O.R.T.H.s massive road sector development program, the govt. is working closely with agencies: World Bank, Asian Development Bank to improve road safety.

Road Safety Tips

Road safety is a result of contributing efforts from all the sectors of the society including both civilians and Govt. officials. In addition to the human

sufferings, the estimated costs of the road injuries are a noticeable amount in GNP per annum. So, some tips can be fruitful in this direction.

Few important Road Safety Tips are mentioned below:

- Don't use your mobile phone whilst driving,
- Use belt in the back seat also,
- Don't drink and drive,
- Always adhere to speed limits,
- Take special care about children, senior citizens and pedestrians.
- Don't drive if tired,
- Pedestrians should walk cautiously and always cross the road through Zebra crossing..
- Always observe and anticipate actions by other road users.
- Keep your distances and always wear helmets and seat belts

SAFETY DEVICES



Fig : Bicycle Helmet



Fig : Air Bags



Fig : Two wheeler helmet



Fig : Two wheeler helmet

Two Wheeler Helmet: A two wheeler helmet is a type of protective headgear used by motorcycle and scooter riders. The primary goal of a two wheeler helmet is riders safety - to protect the rider's head during impact, thus preventing or reducing head injury or saving the rider's life. Some helmets

provide additional conveniences, such as ventilation, face shields, ear protection etc

Out of all the organs in our body, the heart and the brain are the most vital ones. When a two wheeler is involved in an accident, it is the brain that might be at a greater risk of injury. And only the brain is the one that might be affected the most. A brain injury can result due to skull fracture, a concussion, brain hemorrhage, which can result in death.

Even if a part of the brain has been damaged, it might result in the loss of speech or motor skills. In order to protect the brain one must wear a helmet. A motorcycle helmet protects the skull and the brain from extensive damage.

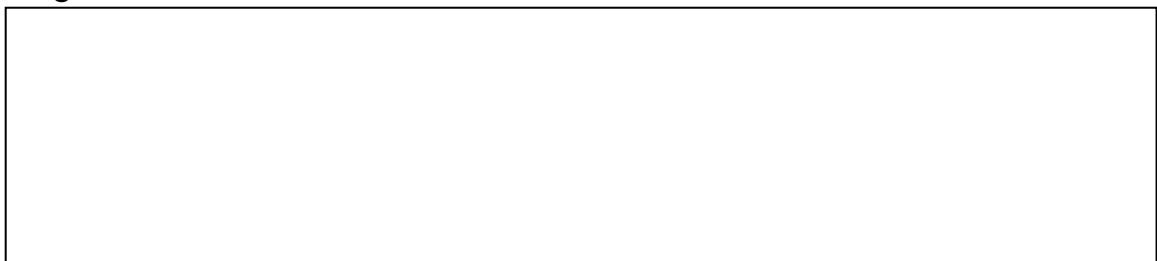
Session 1: Importance of Road safety

Exercise: Assignment

1. List the Road safety rules followed in road.

S.No.	Name of rule
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

2. Observe and identify road safety poster in your school and draw their diagrams



Session 1: Importance of Road Safety

Answer the following questions

(Use additional sheets of paper if necessary)

Fill in the blanks

1. Accident take places in our daily life due to lack of _____ measure.
2. Road safety is emerging as a major _____ in the country.
3. Road safety is a _____ of contributing efforts from all the sectors of the society including both _____ and _____.
4. Hurdles inroad safety are_____._____and_____
5. Important rules of road safety cannot be_____.

Session 1: Importance of Road safety

Checklist for Assessment Activity

Use the following checklist to see if you've met all the requirements for Assessment Activity.

Part A

- Share hurdles of road safety in our country.

Part B

- Discussed in class the following:
 1. What is importance of road safety?
 2. What are the road safety tips?
 3. Why we should take care in road safety?
 4. Road safety importance can not be ignored..

Performance standards/criteria covered by this assessment

Performance standards	Yes	No
Able to list hurdle of road safety		
Able to list road safety tips		

Session 2: Safe and Responsible Driving

Relevant Knowledge

Safe and Responsible Driving Getting ready to drive Before driving

- Ensure that you are comfortable with your mental and physical condition.
- Inspect your vehicle and observe the driving conditions.

While driving you should carry your driving licence, registration certificate, insurance certificate and pollution control certificate. Transport and commercial vehicle drivers should carry the permits and vehicle fitness certificates also.

A combination of knowledge, skill and attitude is required to be a safe driver.

Knowledge of traffic rules and driving practices that help traffic move safely.

Skill to care about the safety of others on the road. We all are responsible for avoiding accidents.

Attitude to co-operate with other drivers to keep traffic moving safely. We must be courteous, giving other drivers space to change lanes, not cutting them off and signaling before turning.



Physical and mental alertness

Be in good physical and mental condition before driving.

DON'T DRIVE IF YOU

- have been drinking alcohol.
- taking any medicine or drug that affects your responses.
- are tired as tiredness affects your driving skills and reaction time.
- are sick or injured.
- are angry or upset.

You could be risking your life or lives of others on the road.

Know your vehicle

Go through the vehicle owner's manual.

You should know the features of the vehicle you are going to drive.
Example - Anti-lock brakes, 4-wheel drive.

Ensure you know where the controls and instruments are and what they do.
Check that all emergency signals and instruments work.

You should be able to turn on wipers, washers, headlights, indicators etc. without having to look at them and without taking your eyes off the road. Seating position



Fig : Seat Belt

Proper, upright position gives more stability while driving. Make sure you can see over the steering wheel and hood. You should be able to see the ground 4-5 feet in front of the vehicle for proper judgment.

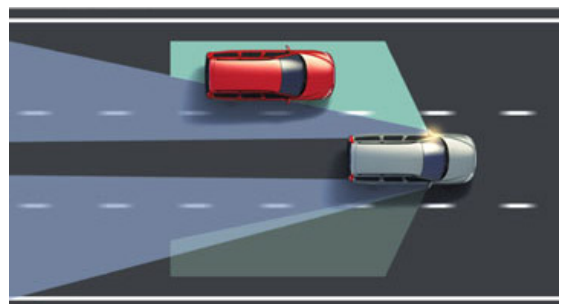
Sit straight upright in the seat with your elbows slightly bent. Adjust the seat so your feet reach the pedals easily. Place your feet flat on the floor under the brake pedal. You are seated properly if you can do this.

Adjust the head-rest to proper height. It protects in case of a collision.

Cars with air bags: Air bag can cause injuries if the seating position is incorrect.

Know your blind spots

Blind spot is an area on each side of the vehicle that you cannot see through the mirrors. Mostly blind spots are to the back left and back right of the vehicle. In the above graphic, the red car is in the blind spot area of the silver car. The



green areas in the above graphic show the blind spots of the silver car.

Adjust the mirrors to get the maximum view and identify your blind spots. You may not see vehicles when they are in these spots.

Position the interior mirror so that the centre of the mirror shows the centre of the rear window. When the interior mirror is properly adjusted you would be able to see directly behind your vehicle.

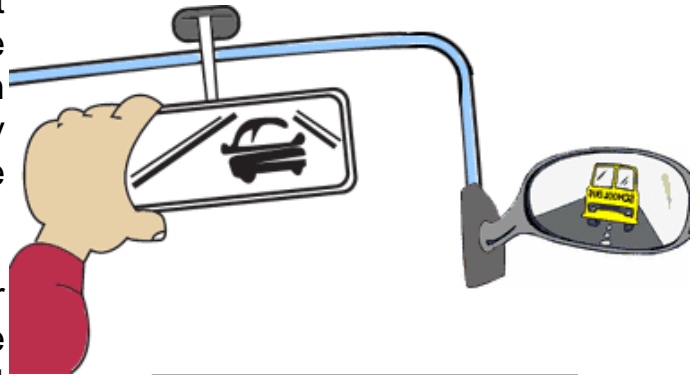


Fig : Adjustment of Interior Mirror

The exterior (wing) mirror adjustment should be made while seated normally for driving. Do not set the right-hand exterior mirror by placing your head against the glass of the driver's door window. Do not adjust the left-hand exterior mirror by leaning to the centre of the vehicle.

Side mirrors show only narrow angles of view, so you have to turn your head to make sure there is nothing in your blind spots.

Fasten your seat belt

Fasten your seat belt before you start. Seat belts are for your safety not just for avoiding challans.

Seat belts should be worn comfortable enough to keep you in your seat if there is a collision. Put the shoulder strap over your shoulder, never under your arm. The lap belt should be put low over the hips, not over the stomach.



Fig : Fasten your seat belt

SEAT BELT SAVES LIFE

- Seat belt keeps you behind the wheel and in control of the vehicle in case of a collision.
- Seat belt keeps your head and body from
- hitting the inside of the vehicle.

- Seat belt keeps you inside the vehicle in a collision. A person who is thrown out of the vehicle during the collision has a higher chance of getting serious injury

Turn on headlights at night and in poor light conditions

Turn on headlights around 30 minutes before sunset and keep them on until 30 minutes after sunrise. Turn on your lights when fog or rain reduces your visibility to less than 100 meters.

Keep your headlights clean and get them adjusted regularly so that they aim properly. In dim light, use your headlights, not parking lights. Parking lights are only for parking.



High beams are banned in cities like Delhi, Chandigarh and other cities. You should not use high beams on roads. If you are travelling on a highway and using high beam headlights, switch to low beams within 150 metres of an oncoming vehicle. Switch to your low beams when you are less than 60 meters behind another vehicle.

Session 2: Safe and Responsible Driving

Exercise: Assignment

1. List the know your vehicle rule followed in driving

S.No.	Name of rule
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

2.

--

Session 2: Safe and Responsible Driving

Answer the following questions

(Use additional sheets of paper if necessary)

Fill in the blanks

1. Safety belt is used in _____.
2. Before driving you should have important _____ with you.
3. Mental status before driving should be _____.
4. Mirror is adjusted to see _____ view.
5. Avoid _____ and _____ while driving.

Session 2: Safe and Responsible Driving

Checklist for Assessment Activity

Use the following checklist to see if you've met all the requirements for Assessment Activity.

Part A

- Safety precautions have been taken while driving two or four wheeler.

Part B

Discussed in class the following:

1. Safe practices followed in car
2. Different signs for different purpose.
3. Blind spot while driving car.
4. Use of high beam in vehicle

Performance standards/criteria covered by this assessment

Performance standards	Yes	No
Able to state safety procedure while driving		
Able to distinguish between various safety measures		

Session 3: Road Signs

Relevant Knowledge

Arm signals

Signal plays important role during smooth movement of traffic. Road signals are to be followed systematically; otherwise it may lead to an accident. For use when direction indicator signals are not used, or when necessary to reinforce direction indicator signals and stop lights.



I intend to move in to the left or turn left



I intend to move out to the right or turn right



I intend to stop.



I intend to slow down.



Indicating the car following you to overtake.

TRAFFIC SIGNS

Traffic signs are divided into 3 main categories

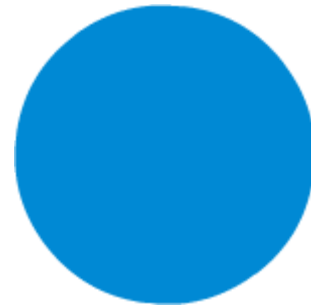
Mandatory/Regulatory signs

Cautionary signs

Information signs



Red circle instructs what should not be done.



Blue circle instructs what should be done.



Triangle cautions



Blue rectangle informs

TYPICAL CAUTIONARY SIGN



RIGHT/LEFT HAND CURVE: This sign is used where the direction of alignment changes. The sign forewarns the driver to reduce the speed and proceed carefully along the road.



RIGHT/LEFT HAIR PIN BEND: This sign is used where the change in direction is so considerable that it amounts to reversal of direction. The symbol bends to right or left depending upon the road alignment.



RIGHT/LEFT REVERSE BEND: This sign is used where the nature of the

reverse bend is not obvious to approaching traffic and constitutes a hazard. If the first curve is to the right, a right reverse bend shall be used. If the first curve is to the left, a left reverse bend is used.



NARROW BRIDGE: This sign is erected on roads in advance of bridges where the clear width between the kerbs or wheel guards is less than normal width of carriageway.

GAP IN MEDIAN: This sign is installed ahead of a gap in the median of a divided carriageway, other than an intersection.



NARROW ROAD: This sign is normally found in rural areas where a sudden reduction in width of pavement causes a danger to traffic.

ROAD WIDENS: This sign is normally found in rural areas where a sudden widening of road causes a danger to traffic, such as, a two-lane road suddenly widening to a dual carriageway.



CYCLE CROSSING: This sign is erected in advance of all uncontrolled cycle crossings.



PEDESTRIAN CROSSING: This sign is erected in advance of both approaches to uncontrolled pedestrian crossings.



SCHOOL: This sign is erected where school buildings or grounds are adjacent to the road where the traffic creates a hazard to children.



MEN AT WORK: This sign is displayed only when men and machines are working on the road or adjacent to it or on overhead lines or poles. This sign is removed when the work is completed.



SIDE ROAD LEFT/RIGHT: This sign is displayed in advance of the side road intersections where a large volume of entering traffic together with restricted sight distance is likely to constitute a hazard. The driver is warned of the



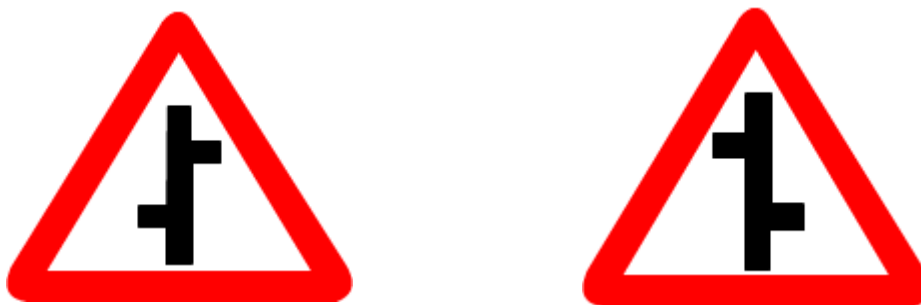
existence of a junction.



Y-INTERSECTION: These signs are displayed on the approach to a bifurcation of any road. This sign warns of the existence of a junction and no other indication given.



MAJOR ROAD: These signs are displayed in advance of crossing with the major road, where a sufficiently large volume of traffic together with a sufficiently large volume of traffic together with restricted sight is likely to cause a hazard.



STAGGERED INTERSECTION: This sign is used to indicate junctions where the

distance between two junctions is not more than 60 meters.



T INTERSECTION: This sign is displayed in advance of T-junctions where the nature of inter-section is not obvious to approaching traffic. This sign is used to warn the driver of the existence of a junction.



ROUNDAABOUT: This sign is used where it is necessary to indicate the approach to a roundabout.



START OF DUAL CARRIAGEWAY: This sign is displayed when a single carriageway ends into a dual carriageway.



END OF DUAL CARRIAGEWAY: This sign is displayed when a dual carriageway is ending and a single carriageway is starting.



REDUCED CARRIAGEWAY: These signs caution the driver of the reduction in the width of the carriageway ahead. This is displayed on undivided carriageways when some portion of the carriageway is closed or reduced for repairs.



TWO WAY OPERATION: This sign is used to caution the driver of a changed pattern of traffic operation of the carriageway expected to carry traffic in one direction only.

CROSS ROAD: This sign is displayed in advance of the cross road where a sufficiently large volume of crossing or entering traffic with restricted sight distance is likely to constitute a hazard.

TYPICAL CAUTIONARY SIGN



CATTLE: This sign is used where there is danger due to farm animals or cattle crossing on the road.

TRAFFIC DIVERSION ON DUAL CARRIAGEWAY: This sign warns the driver of the diversion of traffic from one carriageway to the other. It is used on dual carriageway when one carriageway is closed.



FALLING ROCKS: This sign is used wherever rocks are liable to fall on the road seasonally or throughout the year. The symbol may be reversed to show the side from which rockfall is expected.



FERRY: This sign is used to warn the drivers about the existence of a ferry crossing across a river.



LANE CLOSURE: This sign cautions the driver of the closure of a portion of the carriageway on multi-lane highways.



BARRIER: This sign is erected in advance of a gate controlling entry into a road. A definition plate with words "SLOW BARRIER AHEAD" or "TOLL BARRIER AHEAD" is also displayed on the sign.



LOOSE GRAVEL: This sign is used on section of a road on which gravel may be thrown up by fast moving vehicles.



OVERHEAD CABLE: This sign cautions driver of the presence of overhead power transmission lines.



QUARY SIDE OR RIVER BANK: This sign is used to caution the driver of the presence of water by the side of the road and the impending danger.



ROUGH ROAD: This sign is posted where the road is rough and the drivers are required to slow down their vehicles for safe travel.



RUNWAY: This sign is used to warn the drivers of the presence of runway ahead and possible movement of the aircrafts.



SERIES OF BENDS: This sign is used to installed to caution the driver of the presence of zig-zag for a long distance over the section of road ahead.



SLIPPERY ROAD: This sign is used to warn that the section of the road ahead may be particularly slippery.



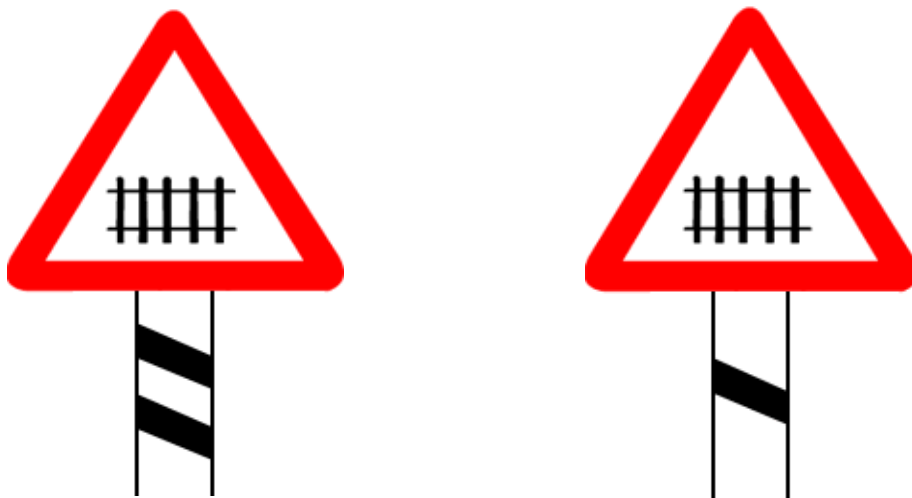
SUDDEN SIDE WIND: This sign is used to caution the driver of the danger of side winds which endangers the lives of travellers. This sign is posted at places where such weather conditions exist.



TRAFFIC SIGNALS: This sign is used to caution the drivers of the presence of traffic signals.



UNGUARDED RAILWAY CROSSING: This sign is used on the approaches of level crossings where there are no gates or other barriers. An advance warning sign (with two bars) is installed at a distance of 200 meters and second sign (with one bar) is installed near the crossing.



GUARDED RAILWAY CROSSING: This sign is used to warn traffic on the approaches to guarded railway crossing. An advance warning sign (with two bars) is installed at a distance of 200 meters and second sign (with one bar) is installed near the crossing.



STEEP ASCENT/STEEP DESCENT: This sign is displayed before a steep upgrade/downgrade that may constitute a hazard to traffic. A gradient of 10 per cent and above is considered steep gradient.



RUMBLE STRIP: This sign is installed in advance of the rumble strips provided on the road to control the speed of the vehicle.

DANGEROUS DIP: This sign is used where a sharp dip in the profile of the road or a causeway is likely to cause considerable discomfort to traffic.



SPEED BREAKER: This sign warns the drivers of the presence of a speed breaker.

PARKING SIGNS



PARKING THIS SIDE



PARKING BOTH SIDES



SCOOTER & MOTOR
CYCLE STAND



CYCLE STAND



TAXI STAND

AUTO-RICKSHAW
STAND

CYCLE-RICKSHAW STAND

SPEED LIMIT AND VEHICLE CONTROL SIGNS

SPEED LIMIT: This sign is erected at the beginning of the section of the road or area covered by a speed restriction, with numerals indicating the speed limit in kilometers per hour.



WIDTH LIMIT: This sign is used where entry of vehicles exceeding a particular width is prohibited.



HEIGHT LIMIT: This sign is erected in advance of an overhead structure where entry is prohibited for vehicles whose height exceeds a certain limit.



LENGTH LIMIT: This sign is used where entry of vehicles exceeding a particular length is prohibited.



LOAD LIMIT: This sign is used where entry of vehicles is prohibited for vehicles whose laden weight exceeds a certain limits.



AXLE LOAD LIMIT: This sign is used where entry of vehicles is prohibited for vehicles whose gross load exceeds a certain limits.

PROHIBITORY SIGNS

STRAIGHT PROHIBITED OR NO ENTRY: These signs are located at places where the vehicles are not allowed to enter. It is generally erected at the end of one-way-road to prohibit traffic entering the roadway in the wrong direction and also at each intersection along the one-way road.



ONE WAY SIGN: These signs are located at the entry to the one-way street and repeated at intermediate intersections on that street.



VEHICLES PROHIBITED IN BOTH DIRECTIONS: This sign is used at the approach end of the roads where entry to all types of vehicular traffic is prohibited, especially in areas which have been designed as pedestrian malls.

HORN PROHIBITED: This sign is used on stretches of the road where sounding of horn is not allowed, near hospitals and in silence zones.



CYCLE PROHIBITED: This sign is erected on each entry to the road where cycles are to be prohibited.



PEDESTRIAN PROHIBITED: This sign is erected on each entry to the road where pedestrians are to be prohibited.



RIGHT/LEFT TURN PROHIBITED: these signs are used at places where vehicles are not allowed to make a turn to the right or left. The signs are also used at the inter-sections of one-way street to supplement the one-way sign.



U-TURN PROHIBITED: This sign is used at places where vehicles are forbidden to make a turn to the reverse direction of travel between the sign and the next inter-section beyond it.



OVERTAKING PROHIBITED: This sign is erected at the beginning of such sections of highways where sight distance is restricted and overtaking will be dangerous.



ALL MOTOR VEHICLES PROHIBITED: This sign is used at places where entry to all types of motor vehicles is prohibited.



TRUCKS PROHIBITED: This sign is used at the entrance to the road where movement of trucks is prohibited.



HAND CART PROHIBITED: This sign is erected on each entry to the road where hand carts are to be prohibited.



BULLOCK CART PROHIBITED: This sign is erected on each entry to the road where bullock carts are to be prohibited.



TONGA PROHIBITED: This sign is erected on each entry to the road where tongas are to be prohibited.



BULLOCK CARTS & HAND CARTS PROHIBITED: This sign is erected on each entry to the road where all types of slow moving vehicles except cycles are to be prohibited.

STOP AND GIVE WAY SIGNS

STOP SIGN: This sign is used on roadways where traffic is required to stop before entering a major road. The vehicle shall proceed past the stop line only after ascertaining that this will not cause any damage to traffic on the main road.



GIVE WAY SIGN: This sign is used to assign right-of-way to traffic on certain roadways and intersections, the intention being that the vehicles controlled by the sign must give way to the other traffic having the right-of-way.

RESTRICION ENDS SIGN

This sign indicates the point at which all prohibitions notified by prohibitory signs for moving of vehicles cease to apply.

COMPULSORY DIRECTION CONTROL AND OTHER SIGNS



COMPULSORY TURN LEFT/RIGHT: These signs indicate the appropriate direction in which the vehicles are permitted to proceed.



COMPULSORY AHEAD OR TURN LEFT/RIGHT: These signs indicate the appropriate directions in which the vehicles are permitted to proceed. Vehicles are supposed to move either of the given two directions.



COMPULSORY AHEAD: This sign indicates that the vehicle is only permitted to proceed ahead.

COMPULSORY KEEP LEFT: This sign is most frequently used on bollards or islands and refuges in the middle of the carriageway and at the beginning of central reserves of dual carriageway. The vehicles are obliged to keep left only.



COMPULSORY CYCLE RICKSHAW TRACK: This sign means only cycles and rickshaws are allowed on this road/carriageway. .



COMPULSORY SOUND HORN: This sign means the motor vehicles shall compulsorily sound horn at the location where the sign is placed. This sign is mostly put at sharp curves on hill roads.



SLIP ROAD AHEAD: This sign means the vehicles can either go straight or turn left.



MAIN ROAD AHEAD: This sign means the vehicles can either go straight or turn right.



PEDESTRIANS ONLY: This sign means only pedestrians are allowed and the traffic is not allowed on this road / carriageway.



BUSES ONLY: This sign means that only buses are allowed and other traffic is not allowed on this road/carriageway.

Session 3: Safety signs

Exercise: Assignment

1. Draw various signs of traffic

Session 3: Safety signs

Answer the following questions

(Use additional sheets of paper if necessary)

Fill in the blanks

1. A traffic sign help in _____ movement of traffic.
2. Hand can also be used as _____ in emergency.
3. Signal traffic light have _____, _____ and _____ colour.

Session 3: Safety signs

Checklist for Assessment Activity

Use the following checklist to see if you've met all the requirements for Assessment Activity.

Part A

- All traffic signal are drawn and displayed.

Part B

Discussed in class the following:

1. No entry sign
2. Different signs for different purpose.
3. Signal role in road safety.
4. Safety signs for different purpose help whom.

Performance standards/criteria covered by this assessment

Performance standards	Yes	No
Able to draw road safety sign		
Able to distinguish between various safety road sign		

Session 4: Driving Rules and Registration

Relevant Knowledge

The basic idea to devise driving rules is to make the traffic more organized and safe. Driving rules are very important; Government has made driving rules for the citizen. These rules are to be followed by every citizen. If you violate then you have to pay the fine or you have to appear in front of court. Rule and their rule number with penalty is explained here.

Driving rules

Sr.No	Rules description	Rule No	Fine
1.	Violation of mandatory signs	199/177/MVA	Rs.100
2.	Improper Parking	122/177/MVA	Rs.100
3.	Without Helmet	129/177/MVA	Rs.100
4	Not using seat belt	138.3/CMVR/177	Rs.100
5	Dangerous Driving	184/MVA	Rs.1000
6	Moving against one way	17RRR/177/MVA	Rs.100
7	Using an registered vehicle/Violation of R. C. Condition	39/192/MVA	Rs.2000
8	Number plate note as per guidelines	50/177/CMVR	Rs.100
9	Without Light/Head/Tail light	105 CMVR/177/MVA	Rs.100
10	Without Helmet pillion rider	129/177/MVA	Rs.100
11	Tripple riding	128/177/MVA	Rs.100
12	Carrying passenger in goods Vehicles	84.2/OMVR 177/MVA	Rs.100
13	Conductor without uniform	23 DMVR 177 MVA	Rs.100
14	Driver without uniform	7DMVR 177/MVA	Rs.100
15	Driver without permit/Violation of permit conditions	66.1/192A/MVA	To court

16	Without Registration Certificate	32/RRR/ 177/MVA	Rs.100
17	Wrong overtaking	184/MVA	Rs.1000
18	Violation of speed limit	112.1/183/MVA	Rs.400
19	Use of Tinted Glass	100.2CMVR/ 177MVA	Rs.100
20	Violation of stop line	177/MVA 185/MVA	Rs.100
21	Drinking Driving	177/MVA	To court
22	Violation of no entry restrictions	115/194/MVA	Rs.2000
23	Other/Unspecified violations u/s		Rs.100

Registration

Whenever a vehicle is purchased then it is registered with State Transport office. All the district have Road Transport Office (RTO). RTO gives a registration number to all road vehicles. Every vehicle is fixed with a registration plate which is commonly known as number plates. These number plates are placed in the front and back of the vehicle.

Registration Rules and Process

Necessity for Registration

No person shall drive any Motor Vehicle and no owner of Motor Vehicle shall cause or permit the vehicle to be driven in any public place or any other place, unless the vehicle is registered in accordance with Chapter 4 of IMV Act 1988.

Registration where to be made?

Every owner of Motor Vehicle shall cause the Vehicle to be Registered by a Registration Authority in whose Jurisdiction he has residence or place of business where the vehicle is normally kept.

Temporary Registration

An application for Temporary Registration shall be made in Form 20 of the Central Motor Vehicle Rules, 1989 prescribed for Registration, under the Act marked "Temporary" to the Registering Authority or to the dealer dealing in the sale of New Motor Vehicles Recognised by the Transport Commissioner. It shall not be necessary to fill in the items 23 to 32 of the Form notwithstanding that it may be a Transport Vehicle.

Permanent Registration

An application for registration of a Motor Vehicle shall be made in **Form 20** to the Registering Authority within a period of 7 days from the date of delivery of such vehicle excluding the period of journey and shall be accompanied by Sales certificate in **Form 21**.

- Road worthiness certificate in **Form 22** from the manufacturers (**Form 22A** from the Body builder).
- Valid Insurance Certificate.
- Proof of Address (Ration Card, Electricity Bill,.....).
- Design approval copy of STA in case Trailer or Semi Trailer.
- Original Sales Certificate from the concerned Authorities in **Form 21** in the case of Ex_Army Vehicle.
- Pollution Under control Certificate.
- Customs Clearance Certificate in the case of Imported Vehicles.
- Appropriate Fee as specified in **Rule 81** of CMV Rules

Session 4: Driving Rules and Registration

Exercise: Assignment

1. List the types of forms used in RTO office while registering a vehicle.

S.No.	Name of Forms
1.	
2.	
3.	

4.	
5.	
6.	
7.	

Session 4: Driving Rules and Registration

Answer the following questions

(Use additional sheets of paper if necessary)

Fill in the blanks

1. RTO is office used for _____ of vehicle
2. Vehicle registration is made at _____ office.
3. Vehicle registration is compulsory for driving _____.
4. Minimum age of driving of a vehicle is _____ year.

Session 4: Driving Rules and Registration

Checklist for Assessment Activity

Use the following checklist to see if you've met all the requirements for Assessment Activity.

Part A

- Differentiate between registration and license.

Part B

Discussed in class the following:

1. Why registration is required?
2. What are the different types documents used in registration?
3. What are advantages of using driving license?
4. Important rules of registration should be known to all.

Performance standards/criteria covered by this assessment

Performance standards	Yes	No
Able to fill registration form		
Able to distinguish different registration form		

Session 5: Driving License

Relevant Knowledge

Driving License

As you must know that while driving a vehicle a person or driver must have a valid document of driving a vehicle. This document is called Driving License. We can say it driver's license/license or driving license, It is an official document which states that a person may operate a motorized vehicle, such as a motorcycle, car, truck or a bus, on a public roadway. Minimum age is 18 years for all vehicles, however motor cycle having engine capacity below 50 cc may be driven at age of 16.

According to the Motor Vehicle Act 1988, a valid Driving License is necessary to drive any motor vehicle on public roads.

- Driving License is issued by the Regional Transport Office (RTO) of Motor Vehicles Inspector's Office after the recipient has passed a driving test and has proved the required age.
- The Driving License in India is segregated as Motorcycle License, Light Motor Vehicle (LMV) license, and Heavy Motor Vehicle (HMV) License.
- Learner's License is issued after passing a theory test.
- The legislation of Driving License is done through the 'Rules of the Road Regulation' and the Motor Vehicle Act 1988.
- The driver of the vehicle is required to keep the original copy of the license while driving.

Types of Driving Licenses in India

To drive a motor vehicle in any public place an effective Driving License is necessary. By effective Driving License it means license issued to a person authorizing him/her to drive vehicle of that particular category. There are different types of licenses issued by the RTO offices. Here we will discuss each of them separately.

1. Learner Driving License

This is a temporary license that is valid up to 6 months from the date of issue. It is basically issued to learn driving of Motor Vehicles.

2. Permanent Driving License

Permanent driving license is issued to those who become eligible for it after thirty days (to apply within 180 days) from the date of issue of the learner license. Person suppose to get permanent driving license should be conversant about the vehicle systems, driving, traffic rules & regulations.

3. Duplicate Driving License

In case of loss, theft, or on mutilation, Duplicate License is issued. The documents to be produced are FIR of the lost license, challan clearance report from RTA Office (in case of Commercial licence renewal) and an application in Form LLD. The particulars are verified by the authority from the records. The duplicate license will have the valid period same as the previous license. If the license is lost and expired by more than 6 months it requires permission from Head Quarter of Transport Department.

It is recommended to keep a photocopy of the original license or particulars of license noted in order to make it easier for the issuing authority to locate the particulars from their record.

4. International Driving License

The motor licensing authority also issues International Driving License. The validity of this license is for one year. Person visiting the country is required to collect the license from there within one year period. Apart from address proof and birth certificate, one has to produce a valid passport and valid visa while applying.

5. Motorcyle License or Two-wheeler License

Two-wheeler license is issued by the Regional Transport Authority (RTO) to permit driving of only two-wheeler vehicles like bike, scooter and moped.

6. Light Motor Vehicle License (LMV)

Light Motor Vehicle License is issued to drive light vehicles like auto rickshaws, motor car, jeep, taxi, three-wheeler delivery vans, etc.

7. Heavy Motor Vehicle License (HMV)

Heavy Motor Vehicle License is issued to drive heavy vehicles like trucks, buses, tourist coaches, cranes, goods carriages, etc. A person with HMV license can drive light vehicles but Light Motor Vehicle License do not permit to drive heavy vehicles.

Session 5: Driving License

Exercise: Assignment

- List the types of forms used in RTO office while making a licence.

S.No.	Name of Forms
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Session 5: Driving Licence

Answer the following questions

(Use additional sheets of paper if necessary)

A. Fill in the blanks

- RTO is office used for _____ of vehicle
- Driving licence is made at _____ office.
- License is compulsory for driving _____.
- Minimum age of driving licence of a vehicle is _____ year.

Session 5: Driving License

Checklist for Assessment Activity

Use the following checklist to see if you've met all the requirements for Assessment Activity.

Part A

- Differentiate between temporary and permanent license.

Part B

Discussed in class the following:

1. Why license is required?
2. What are the different types documents used in license?
3. What are advantages of using driving license?
4. Important rules of license should be known to all.

Performance standards/criteria covered by this assessment

Performance standards	Yes	No
Able to fill license form		
Able to distinguish different license form		

Suggested Reading

Books

Title	Author	Publisher
Automobile Engineering Vol I	Kirpal Singh	Standard Publishers
Automobile Engineering, Vol II	Kirpal Singh	Standard Publishers
Text Book of Automobile Engineering	R K Rajput1	Laxmi Publications
Automobile Engineering	R. K. Singal	S. K. Kataria and Sons
Automobile Engineering Theory	Kapil Dev	Computech Publications
Automobile Engineering	K. M. Moeed	S. K. Kataria and Sons

Websites

auto.indiamart.com/auto-technology

www.automobileindia.com/consumer-guide/automobile-technology

auto.indiamart.com/auto-technology

books.google.com/books/about/Automobile_Engineering.html

www.bineadvice.org

www.wikipedia.com

auto.indiamart.com/auto-technology

<http://drivingtest.in/forms-fees-procedure.php>

http://en.wikipedia.org/wiki/Driving_licence_in_India

<http://india.gov.in/howdo/howdoi.php?service>

www.chandigarhtrafficpolice.org

List of Contributors

1. Mr. Sunil K. Chaturvedi, CEO, Automotive Skills Development Council, Core 4-B 5th Floor India Habitat Centre, Lodhi Road, New Delhi – 110 003
2. Mr. A.C. Deb, Sr. Lecturer, (Auto) – HOD, PUSA Polytechnic PUSA, New Delhi -12
3. Mr. Vikas Gautam, S.B.V. NO.1, Morigate, Delhi – 06,
4. Prof. A.P. Verma, Ex-Prof. & HOD, PSSCIVE, Bhopal.
5. Sh. Deepak Shudhalwar, Assistant Professor, E & T Division, PSSCIVE, Bhopal
6. Dr. Saurabh Prakash, Associate Professor, E & T Division, PSSCIVE, Bhopal – Programme Coordinator