



Basic Metal Works

Level-I

Learning Guide#19

Unit of Competence: Implement and Apply

OHS Practice

Module Title: Implementing and Applying

OHS Practice

LG Code: IND BMW1 M6 LO1-LG-19

TTLM Code: IND BMW M6 TTLM 1019v1

LO₁:-Identify workplace procedures for occupation health and safety.



Instruction Sheet	Learning Guide #19
--------------------------	---------------------------

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Identifying workplace procedures for occupational health and safety
- Following workplace procedures for hazard identification and risk control
- Contributing to management of OHS in the workplace.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:

- Familiarize policies and procedures.
- Recognize and reporting Hazards in the work area.

Learning Instructions:

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
3. Accomplish the “Self-checks” in the information sheets.
4. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).



5. If you earned a satisfactory evaluation proceed to “Operation sheets and LAP Tests if any. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
6. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
7. Then proceed to the next information sheet.
8. If you earned a satisfactory evaluation in each self-check proceed to “Operation Sheets” in pages. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activities.
9. Read the “Operation Sheets” and try to understand the procedures discussed.
10. Do the “LAP test” in each page (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advise you on additional work. But if satisfactory you can proceed to Learning Guide.



Information Sheet-1

Familiarize policies and procedures.

1. OHS Policies and Procedures

What is the difference between policies and procedures?

- A **policy** is a statement about an issue in the workplace and says what the business intends to do about the issue. a policy describes:
 - ✓ The desired standard;
 - ✓ A specific objective to meet
 - ✓ A timeframe;
 - ✓ Arrangements for reviewing the policy;
 - ✓ Management's commitment to fulfilling the policy;
 - ✓ Steps to be taken to implement the policy; and what is expected of all employees in relation to the particular issue.

If the workplace is going to be successful in following that policy, all employees affected by the issue must know about and understand the policy.

- A **procedure** sets out step-by-step instructions on how to deal with an activity in the workplace.

Activities which may have specific procedures developed include:

- ✓ working in confined spaces;
- ✓ resolving issues;
- ✓ evacuations;
- ✓ the overall work flow, from materials coming into the workplace, to the final product going out;



- ✓ Workplace inspections; or administrative activity like purchasing.

Where there are workplace hazards, and risks to health and safety, the procedure sets out what to do at every stage of the activity. Procedures need to work. They need to be tested thoroughly before they are implemented.

Employees engaged in an activity must clearly understand and be able to follow any relevant written procedure.

- **What procedures do you need?**

You may not be able to develop a procedure for every activity in the workplace at least not in the short term. Start with those which have the most significant impact on health and safety. These might be specific activities such as handling hazardous substances, or they may be general processes such as purchasing equipment. In some cases you will have to start from scratch. In other cases you can build on a health and safety standard which must be followed for a particular procedure.

There are many aspects of your work environment where written procedures will help prevent workplace illness and injuries and control hazards at their source.

Some examples where written procedures may be required are:

- ✓ Specific workplace hazards
- ✓ Identification and assessment of the risks
- ✓ Risk control
- ✓ Reporting hazards;
- ✓ Issue resolution;
- ✓ Consultation on proposed change;
- ✓ Workplace inspections;
- ✓ Investigating incidents and issues, with corrective actions;
- ✓ Reactive and response activities such as:
- ✓ First aid and medical emergencies
- ✓ Reporting illness, injury
- ✓ Reporting incidents and dangerous

- **Why should you have health and safety policies and procedures?**



Health and safety policies and procedures are part of a framework for effective health and safety management. A general health and safety policy states management's intention to provide a safe and healthy workplace, and states the health and safety goals of a workplace. It should also demonstrate the employer's acknowledgment of their legal duties and their intention to voluntarily comply with those duties.

Specific policies and procedures address particular issues or hazards. They are administrative measures to control workplace hazards and should be used together with other hazard control measures to eliminate or reduce the risk of workplace illness or injury.

An objective of the *Occupational Health and Safety Act 1985* is the elimination, at the source, of risks to the health, safety and welfare of persons at work. Regulations supporting the *Occupational Health and Safety Act* require the *elimination* of risks as the first step in risk control.

- **Legal Requirement**

Under the Control of Substances Hazardous to Health COSHH regulations 2002 there is a hierarchy of control:-

1. Elimination;
2. Substitution;
3. Segregation;
4. Ventilation;
5. Local exhaust variation;
6. Personal Protective equipment.

PPE should only be used as a "last resort" or as a short-term emergency measure while other control measures are assessed.

For example:-

- **Elimination**:-eliminating toxic substances, hazardous plant or processes which are not necessary to a system of work. If risks cannot be eliminated, occupational health and safety legislation requires that they be **reduced** so far as is practicable by using one or more of the following methods:
- **Substitution** — substituting a toxic substance, hazardous plant or process with one known to be less harmful to health. Substitution is not only a preferred control method; it may also be the least expensive. For example, substituting a



less hazardous material to control a vapour hazard makes more sense than installing an expensive ventilation system.

- **Isolation** — enclosing or isolating a hazard such as a toxic substance, plant or process from employees, to eliminate or reduce the risk of injury or illness. Using a fume cupboard or sound enclosure booths are examples of moving a hazardous process away from the main work area (and other employees) to a site where emissions can be controlled.
- **Engineering controls** — changing processes, equipment or tools,
- for example:
 - ✓ *Machine guards and machine operation* controls;
 - ✓ Ventilation to remove chemical fumes and dusts, and using wetting down techniques to minimize dust levels;
 - ✓ Changing layout of work levels to minimize bending and twisting during manual handling.

If a risk to workplace health and safety remains after the above methods have been used, **administrative controls** should be applied or, if these are still not adequate, **personal protective clothing and equipment** worn. These methods of risk control are not preferred because the source of the risk is not eliminated or reduced.

- **Administrative controls** — changing work procedures to reduce exposure to existing hazards.
- For example:
 - ✓ Reducing exposure to hazards by job rotation; limiting the number of employees exposed to the hazard by limiting access to hazardous areas
- **Personal protective clothing and equipment**
 - ✓ Devices and clothing which provide individual employees with some protection from hazards. An effective personal protective clothing and equipment system requires considerable effort by the employer to ensure that:
 - ✓ Proper protective devices are selected;
 - ✓ Employees are individually fitted;
 - ✓ Proper instruction on the need for, and use of, personal protective clothing and equipment is provided;
 - ✓ Standards are enforced; and
 - ✓ An effective system of cleaning and maintenance is devised.



Administrative controls and protective clothing and equipment may provide interim solutions in a planned program to eliminate or reduce a particular risk, or they may be used in addition to other control methods. Specific health and safety policies and procedures should provide clear direction or instruction by

Which workplace hazards will be identified, and the risks assessed and controlled by the measures Described here.

A formal policy or procedure can ensure hazards are dealt with in a structured and Agreed manner, rather than in response to a crisis. More information about hazard identification, risk assessment and risk control is in the *Introduction to Hazard Management* booklet in the *Getting Started with Workplace Health and Safety* series.

Who's responsible for developing policies and procedures?

Developing policies and procedures is a management responsibility. Consultation with employees however, is very important. (.) Requires employers to consult with health and safety representatives on work practices whenever practicable.

Consultation helps to create policies that can be understood, will work, and will be followed. Developing procedures does not make employees responsible for hazards at work. The responsibility for ensuring the workplace is safe and that work procedures are followed remains a responsibility of the employer.

There may be times when you need to call on specialist assistance from within or outside your organization to help develop policies and procedures.



Information Sheet-2	Work Area Hazards
----------------------------	--------------------------

- **Definition of hazards**

A hazard is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work. Basically, a hazard can cause harm or adverse effects (to individuals as health effects or to organizations as property or equipment losses). Sometimes a hazard is referred to as being the actual harm or the health affect it caused rather than the hazard. For example, the disease tuberculosis (TB) might be called a hazard by some but in general the TB-causing bacteria would be considered the "hazard" or "hazardous biological agent".

- **What are examples of a hazard?**

Workplace hazards can come from a wide range of sources. General examples include any substance, material, process, practice, etc. that has the ability to cause harm or adverse health effect to a person under certain conditions. See Table 1.

Table1:-Examples of Hazards and Their Effects		
Workplace Hazard	Example of Hazard	Example of Harm Caused
Thing	Knife	Cut
Substance	Benzene	Leukemia
Material	Asbestos	Mesothelioma
Source of Energy	Electricity	Shock, electrocution
Condition	Wet floor	Slips, falls



Process	Welding	Metal fume fever
Practice	Hard rock mining	Silicosis

As shown in Table 1, workplace hazards also include practices or conditions that release uncontrolled energy like:-

- ✓ An object that could fall from a height (potential or gravitational energy),
- ✓ A run-away chemical reaction (chemical energy),
- ✓ The release of compressed gas or steam (pressure; high temperature),
- ✓ Entanglement of hair or clothing in rotating equipment (kinetic energy), or
- ✓ Contact with electrodes of a battery or capacitor (electrical energy).

A common way to classify hazards is by category

- ✓ **Biological** - bacteria, viruses, insects, plants, birds, animals, and humans, etc.,
- ✓ **Chemical** - depends on the physical, chemical and toxic properties of the chemical.
- ✓ **Ergonomic** - repetitive movements, improper set up of workstation, etc.,
- ✓ **Physical** - radiation, magnetic fields, pressure extremes (high pressure or vacuum), noise, etc.,
- ✓ **Psychosocial** - stress, violence, etc.,
- ✓ **Safety** - slipping/tripping hazards, inappropriate machine guarding, equipment malfunctions or breakdowns

- **What is risk?**

Risk is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard. It may also apply to situations with property or equipment loss.

For example: The risk of developing cancer from smoking cigarettes could be expressed as "cigarette smokers are 12 times (for example) more likely to die of lung cancer than non-smokers". Another way of reporting risk is "a certain number, "Y", of smokers per 100,000 smokers will likely develop lung cancer" (depending on their age and how many years they have been smoking). These risks are expressed as a probability or likelihood of developing a disease or getting injured, whereas hazards refer to the possible consequences (e.g., lung cancer, emphysema and heart disease from cigarette smoking).



Factors that influence the degree of risk include:

- ✓ How much a person is exposed to a hazardous thing or condition,
- ✓ How the person is exposed (e.g., breathing in a vapors, skin contact), and
- ✓ How severe are the effects under the conditions of exposure.

• What is a risk assessment?

- ✓ Risk assessment is the process where you:
- ✓ Identify hazards,
- ✓ Analyze or evaluate the risk associated with that hazard, and
- ✓ Determine appropriate ways to eliminate or control the hazard.

The OSH Answers Risk Assessment has details on how to conduct an assessment and establish priorities.

What is an adverse health effect?

A general definition of adverse health effect is "any change in body function or the structures of cells that can lead to disease or health problems".

Adverse health effects include:

- ✓ Bodily injury,
- ✓ Disease,
- ✓ Change in the way the body functions, grows, or develops,
- ✓ Effects on a developing fetus (teratogenicity effects, fetotoxic effects),
- ✓ Effects on children, grandchildren, etc. (inheritable genetic effects)
- ✓ Decrease in life span,
- ✓ Change in mental condition resulting from stress, traumatic experiences, exposure to solvents, and so on, and
- ✓ Effects on the ability to accommodate additional stress.



Basic Metal Works

Level-I

Learning Guide#20

Unit of Competence: Implement and Apply

OHS Practice

Module Title: Implementing and Applying

OHS Practice

LG Code: IND BMW1 M6 LO2-LG-19

TTLM Code: IND BMW M6 TTLM 1019v1



LO₂:- Follow workplace procedures for hazard identification and risk control.

Instruction Sheet-2

Learning Guide #20

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Identifying workplace procedures for occupational health and safety
- Following workplace procedures for hazard identification and risk control
- Contributing to management of OHS in the workplace.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:

- Managing and maintaining Work area.
- Deciding appropriate action in emergencies by utilizing basic problem-solving techniques
- Following road traffic accidents and emergencies.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assist understanding them.
4. Accomplish the “Self-checks” in the information sheets.



5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets and LAP Tests if any. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. Then proceed to the next information sheet.
9. If you earned a satisfactory evaluation in each self-check proceed to “Operation Sheets” in pages. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activities.
10. Read the “Operation Sheets” and try to understand the procedures discussed.
11. Do the “LAP test” in each page (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to Learning Guide.



Information Sheet-1	Managing and maintaining Work area.
----------------------------	-------------------------------------

Manage Work Area

Working Areas Are:-

- ✓ Manufacturing and training workshops, tool rooms
- ✓ Indoor or outdoor location
- ✓ Immediate workstation space,
- ✓ Offices, class rooms and reception areas

2.2. Work Place Inspection

Workplace inspections are one of the best tools for finding problems and assessing their risks before accidents or other losses occur.

A well-managed inspection schedule should meet such goals as:

- ✓ Confirming rules and processes are followed
- ✓ Identifying potential problems that were not anticipated during design or task analysis
- ✓ Identifying equipment deficiencies such as normal wear and tear, abuse, or misuse
- ✓ Identifying bad practice
- ✓ Identifying process requirements that are unrealistic or unattainable
- ✓ Identifying effects of changes in processes or materials
- ✓ Identifying inadequacies in hazard controls
- ✓ Providing management self-appraisal information
- ✓ Demonstrating management commitment through visible activity for health and safety.

Inspection, detection and correction activities are hard to beat as ways of showing employees that their health and safety is important.

Two broad categories are 'informal' inspections and 'planned' inspections. Both are important. Both are discussed below, with major emphasis on planned inspections.



2.3. Prohibition notice

If there is a risk of serious personal injury, the inspector can issue a *Prohibition Notice*. This immediately stops the activity that is giving rise to the risk until the remedial action specified in the notice has been taken to the Inspector's satisfaction. The prohibition notice can be served upon the person undertaking the dangerous activity, or it can be served upon the person in control of the activity at the time the notice is served.

2.4. Improvement notice

If there is a legal contravention of any of the relevant statutory provisions, the inspector can issue an *Improvement Notice*. This notice requires the infringement to be remedied within a specified time. It can be served on any person on whom the responsibilities are placed. The latter person can be an employer, employee or a supplier of equipment or materials.

Prosecution

In addition to serving a Prohibition Notice or an Improvement Notice, the inspector can prosecute any person (including an employee – you) for contravening a relevant statutory provision. Finally, the inspector can seize, render harmless or destroy any substance or article which the inspector considers to be the cause of imminent danger or personal injury.

Thus every employee must be a fit and trained person capable of carrying out his or her assigned task properly and safely. Trainees must work under the supervision of a suitably trained, experienced worker or instructor. By law, every employee must:

1. Obey all the safety rules and regulations of his or her place of employment.
2. Understand and use, as instructed, the safety practices incorporated in particular activities or tasks.
3. Not proceed with his or her task if any safety requirement is not thoroughly understood, guidance must be sought.
4. Keep his or her working area tidy and maintain his or her tools in good condition.
5. Draw the attention of his or her immediate supervisor or the safety officer to any potential hazard.
6. Report all accidents or incidents (even if injury does not result from the incident) to the responsible person.
7. Understand emergency procedures in the event of an accident or an alarm.



8. Understand how to give the alarm in the event of an accident or an incident such as fire.

9. Co-operate promptly with the senior person in charge in the event of an accident or an incident such as fire.

Therefore, safety health and welfare are very personal matters for any worker, such as you, who is just entering the engineering industry. This chapter sets out to identify the main hazards and suggests how they may be avoided. Factory life, and particularly fabrication and welding engineering, is potentially dangerous and you must take a positive approach towards safety, health and welfare.

2.5. Further legislation and regulations concerning safety

In addition to the Health and Safety at Work etc. Act, the following are examples of legislation and regulations that also control the conditions under which you work and the way in which you work. Such legislation is updated from time to time and new legislation concerning health and safety is introduced. Ensure that you are familiar with the latest issue of such legislation.

1. Factories Act.
2. Safety Representatives and Safety Committees Regulations.
3. Notification of Accidents and General Occurrences Regulations.
4. The Management of Health and Safety at Work Regulations.
5. The Protection of Eyes Regulations.
6. Electricity at Work Regulations.
7. Low Voltage Electrical Equipment (Safety) Regulations. This includes voltage ranges of 50 volts to 1000 volts (AC) and 75 volts to 1500 volts (DC).

Fabrication and Welding Engineering

8. Abrasive Wheels Regulations.
9. Noise at Work Regulations.

You are not expected to have a detailed knowledge of all this legislation, but you are expected to know of its existence, the main topic areas that it covers, and how it affects your working conditions, your responsibilities, and the way in which you work.



There are many other Laws and Regulations that you will come across depending upon the branch of the fabrication and welding engineering industry in which you work and the equipment you use.

- **responsibilities**

All employers must, by law, maintain a safe place to work. To fulfil all the legal obligations imposed upon them, employers must ensure that:

1. The workplace is provided with a safe means of access and exit so that in the case of an emergency (such as fire) no one will be trapped. This is particularly important when the workplace is not at ground level. Pedestrian access and exits should be segregated away from trucks that are delivering materials or collecting finished work. The premises must be kept in good repair – worn floor coverings and stair treads are a major source of serious falls.
2. All plant and equipment is safe so that it not only complies with the *Machinery Directive* but also complies with British Standards Institution (BSI) and CE requirements. It must be correctly installed and properly maintained. The plant and any associated cutters and tools must also be properly guarded.
3. Working practices and systems are safe and that, where necessary, protective clothing is provided.
4. A safe, healthy and comfortable working environment is provided. That the temperature and humidity is maintained at the correct levels for the work being undertaken.
5. There is an adequate supply of fresh air and that fumes and dust are either eliminated altogether, or are reduced to an acceptable and safe level.
6. There is adequate and suitable natural and artificial lighting in the workplace, particularly over stairways.
7. There is adequate and convenient provision for washing and sanitation.
8. There are adequate first aid facilities under the supervision of a qualified person. This can range from a first aid box under the supervision of a person trained in basic first aid procedures for a small firm, to a full-scale ambulance room staffed by professionally qualified medical personnel in a large firm.
9. Provision is made for the safe handling, storing, and transportation of raw materials, work-in-progress and finished goods awaiting delivery.



10. Provision is made for the safe handling, storing, transportation and use of dangerous substances such as compressed gases (e.g. oxygen and acetylene), and toxic and flammable solvents.

11. There is a correct and legal system for the reporting of accidents and the logging of such accidents in the *accident register*.

12. There is a company policy for adequate instruction, training and supervision of employees.

This must not only be concerned with safety procedures but also with good working practices.

Such instruction and training to be updated at regular intervals.

13. There is a safety policy in force. This safety policy must be subject to regular review. One of the more important innovations of the Health and Safety at Work etc. Act is contained in section 2(4) which provides for the appointment of safety representatives from amongst the employees, who will represent them in consultation with the employers, and have other prescribed functions.

14. Where an employer receives a written request from at least two safety representatives to form a *safety committee* the employer shall, after consulting with the applicants and representatives of other recognized unions (if applicable) whose members work in the workplace concerned, establish a safety committee within the period of three months after the request. The employer must post a notice of the composition of the committee and the workplaces covered. The notice must be positioned where it may be easily read by the employees concerned.

15. Membership of the safety committee should be settled by consultation. The number of management representatives should not exceed the number of safety representatives. Where a company doctor, industrial hygienist or safety officer/adviser is employed they should be ex-officio members of the committee.

16. Management representation is aimed at guaranteeing the necessary knowledge and expertise to provide accurate information on company policy, production needs and technical matters in relation to premises, processes

- **responsibilities**

All employees (including you) are as equally responsible for safety as are their employers. Under the Health and Safety at Work etc. Act, employees are expected to take reasonable care for their own health and safety together with the health and



safety of other people with whom they work, and members of the public who are affected by the work being performed.

Further, the misuse of, or interference with, equipment provided by an employer for health and safety purposes is a *criminal offence*. It is up to all workers to develop a sense of *safety awareness* by following the example set by their instructors.

Regrettably not all older workers observe the safety regulations as closely as they should. Take care that you choose for your 'role model'.

- The basic requirements for safe working are to:
 1. Learn the safe way of doing each task. This is also the correct way.
 2. Use the safe way of carrying out the task in practice.
 3. Ask for instruction if you do not understand a task or have not received previous instruction.
 4. Be constantly on your guard against careless actions by yourself or by others.
 5. Practice good housekeeping at all times, e.g. keep your working area clean and tidy and your tools and equipment in good condition.
 6. Co-operate promptly in the event of an accident or a fire.
 7. Report all accidents to your instructor or supervisor.
 8. Draw your instructor's or your supervisor's attention to any potential hazard you have noticed.

- **Electrical hazards**

The most common causes of electrical shock are shown in Fig. 1.1. The installation and maintenance of electrical equipment must be carried out only by a fully trained and registered electrician. The installation and equipment must conform to international standards and regulations as laid down in Safety Legislation and the Codes of Practice and Regulations, published by the Institution of Electrical Engineers (IEE).

An electric shock from a 240 volt single-phase supply (lighting and office equipment) or a 415 volt three-phase supply (most factory machines) can easily kill you.

Even if the shock is not sufficiently severe to cause death, it can still cause serious injury. The sudden convulsion caused by the shock can throw you from a ladder or against moving machinery. To reduce the risk of shock, all electrical equipment should be *earthed* or *double insulated*. Further, portable power tools should be fed from a low-voltage transformer at 110 volts. The power tool must be suitable for



operating at such a voltage. The transformer itself should be protected by a circuit breaker containing a residual current detector.

The fuses and circuit breakers designed to protect the supply circuitry to the transformer react too slowly to protect the user from electric shock. The electrical supply to a portable power tool should, therefore, be additionally protected by a residual current detector (RCD). Such a device compares the magnitudes of the current flowing in the live and neutral conductors supplying the tool. Any leakage to earth through the body of the user or by any other route will upset the balance between these two currents. This results in the supply being immediately disconnected. The sensitivity of residual current detectors is such that a difference of only a few milliamperes is sufficient to cut off the supply and the time delay is only a few microseconds. Such a small current applied for such a short time is not normally dangerous.

In the event of rendering first aid to the victim of electrical shock, great care must be taken when pulling the victim clear of the fault which caused the shock.

The victim can act as a conductor and thus, in turn, electrocute the rescuer. If the supply cannot be quickly and completely disconnected, always pull the victim clear by his or her clothing which, if dry, will act as an insulator. If in doubt, hold the victim with a plastic bag or cloth known to be dry. Never touch the victim's bare flesh

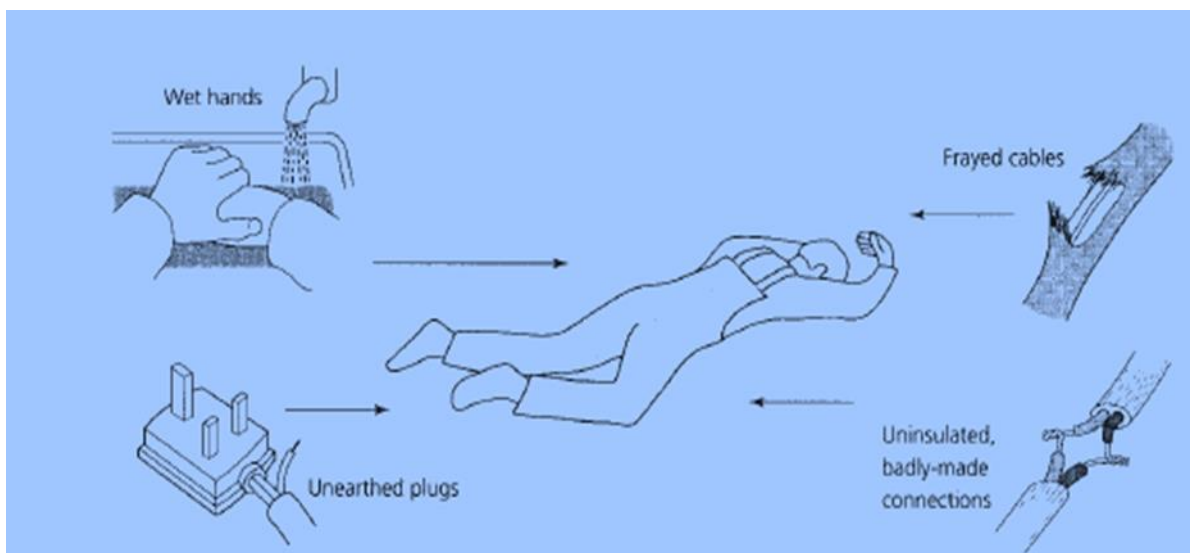


Fig.1.1. Causes of electric shock



Until the victim is clear of the electrical fault. Artificial respiration must be started immediately the victim has been pulled clear of the fault or the live conductor.

Fire fighting is a highly skilled operation and most medium and large firms have properly trained teams who can contain the fire locally until the professional brigade arrives. The best way you can help is to learn the correct fire drill, both how to give the alarm and how to leave the building. It only requires one person to panic and run in the wrong direction to cause a disaster.

- **In an emergency never lose your head and panic**

Smoke is the main cause of panic. It spreads quickly through a building, reducing visibility and increasing the risk of falls down stairways. It causes choking and even death by asphyxiation. Smoke is less dense near the floor: as a last resort – crawl. To reduce the spread of smoke and fire, keep fire doors closed at all times but never locked. The plastic materials used in the finishes and furnishings of modern buildings give off highly toxic fumes. Therefore it is best to leave the building as quickly as possible and leave the fire-fighting to the professionals who have breathing apparatus.

If you do have to fight a fire there are some basic rules to remember. A fire is the rapid oxidation (burning) of flammable materials at relatively high temperatures. Figure 1.2 shows that removing the air (oxygen), or the flammable materials (fuel), or lowering the temperature will result in the fire ceasing to burn. It will go out. It can also be seen from Fig. 1.2 that different fires require to be dealt with in different ways.

- Saving human life is more important than saving property

Fire extinguishers

The normally available fire extinguishers and the types of fire they can be used for are as follows.

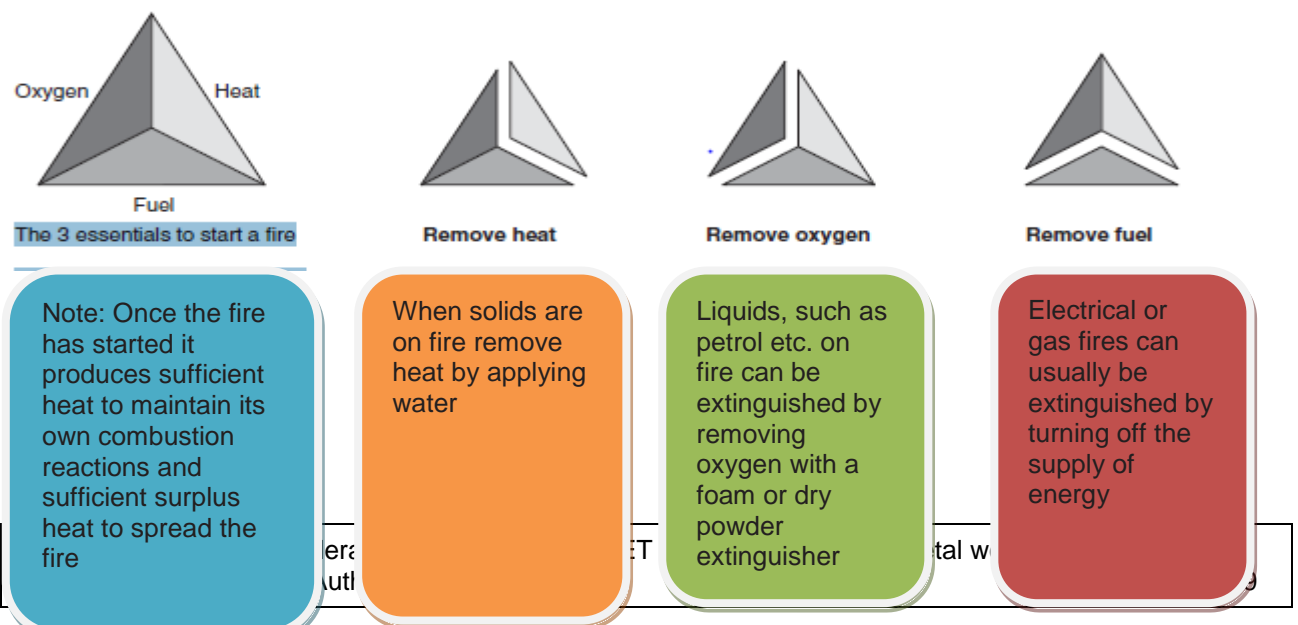




Figure 1.2 How to remove each of the three items necessary to start a fire

Note: once the fire has started it provides sufficient heat to maintain its own combustion reaction and sufficient surplus heat spread the fire

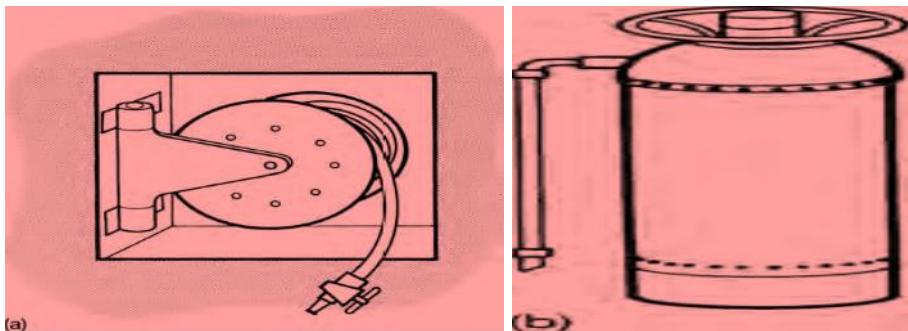


Fig. 1.3 (a) Hose point and (b) pressurized water extinguisher Water

Used in large quantities, water reduces the temperature and puts out the fire. The Steam generated also helps to smother the flames as it displaces the air and therefore the oxygen essential to the burning process. However, for various technical reasons, water should only be used on burning solids such as wood, paper and some plastics.

A typical hose point and a typical pressurized water extinguisher are shown in Fig.

1.3. Foam extinguishers

These are used for fighting oil and chemical fires. The foam smothers the flames and prevents the oxygen in the air from reaching the burning materials at the seat of the fire. Water alone cannot be used because oil floats on the water and this spreads the area of the fire. A typical foam extinguisher is shown in Fig. 1.4(a).

Note: Since both water and foam are electrically conductive, do not use them on fires Associated with electrical equipment or the person wielding the hose or the extinguisher could be electrocuted.

- **Carbon dioxide (CO₂) extinguishers**

These are used on burning gases and vapours. They can also be used for oil and chemical fires in confined places. The carbon dioxide gas replaces the air and



smothers the fire. It can only be used in confined places, where it cannot be displaced by draughts.

Note: If the fire cannot breathe, neither can you breathe so care must be taken to evacuate all living creatures from the vicinity before operating the extinguisher. Back away from the bubble of CO₂ gas as you operate the extinguisher, do not advance towards it. Fig. 1.4(b) shows a typical CO₂ extinguisher.



Fig:-1.4. Fire extinguishers: (a) foam; (b) CO₂; (c) vaporizing liquid; (d) Dry powder

- **Vaporizing liquid extinguishers**

These include CTC, CBM and BCF extinguishers. The heat from the fire causes rapid vaporization of the liquid sprayed from the extinguisher and this vapour displaces

The air and smothers the fire. Since a small amount of liquid produces a very large amount of vapour, this is a very efficient way of producing the blanketing vapour. Any vapour that will smother the fire will also smother all living creatures which must be evacuated before using such extinguishers. As with CO₂ extinguishers always back away from the bubble of vapour, never advance into it. Vaporizing liquid extinguishers are suitable for oil, gas, vapour and chemical fires. Like CO₂ extinguishers, vaporizing liquid extinguishers are safe to use on fires associated with electrical equipment.

A typical example of a vaporizing liquid extinguisher is shown in Fig. 1.4(c).

- **Dry powder extinguishers**

These are suitable for small fires involving flammable liquids and small quantities of solids such as paper. They are also useful for fires in electrical equipment, offices



and kitchens since the powder is not only non-toxic, it can be easily removed by vacuum cleaning and there is no residual mess. The active ingredient is powdered sodium bicarbonate (baking powder) which gives off carbon dioxide when heated. A typical example of a dry powder extinguisher is shown in Fig. 1.4(d) .

- **General rules governing the use of portable extinguishers**

- ✓ Since fire spreads quickly, a speedy attack is essential if the fire is to be contained.
- ✓ Sound the alarm immediately the fire is discovered.
- ✓ Send for assistance before attempting to fight the fire.
- ✓ Remember:
 - (a) Extinguishers are only provided to fight small fires.
 - (b) Take up a position between the fire and the exit, so that your escape cannot be cut off.
 - (c) **Do not** continue to fight the fire if:
 - (i) It is dangerous to do so
 - (ii) There is any possibility of your escape route being cut off by fire, smoke, or collapse of the building
 - (iii) The fire spreads despite your efforts
 - (iv) Toxic fumes are being generated by the burning of plastic furnishings and finishes
 - (v) There are gas cylinders or explosive substances in the vicinity of the fire.

If you have to withdraw from the fire, wherever possible close windows and doors behind you but not if such actions endanger your escape.

Finally, ensure that all extinguishers are recharged immediately after use.

- **Fire precautions**

It is the responsibility of employers and their senior management (duty of care) to ensure the safety of their employees in the event of fire. However, the following precautions should be taken to prevent fire breaking out in the first place:

- ✓ Ensure ease of exit from the premises at all times – emergency exits must not be locked or obstructed.
- ✓ Easy access for fire appliances from the local, professional Brigade.
- ✓ Regular inspection of the plant, premises and processes by the Local Authority Fire Brigade's fire prevention officer. No new plant or processes involving



flammable substances should be used without prior notification and inspection by the fire prevention officer.

- ✓ The above note also applies to the Company's insurance inspector.
- ✓ Regular and frequent fire drills must be carried out and a log kept of such drills including the time taken to evacuate the premises. A roll call of all persons present should be taken immediately the evacuation is complete.
- ✓ A meeting of the safety committee should be called as soon as possible after a fire drill to discuss any problems, improve procedures and to learn lessons from the exercise.

- **Fire prevention**

Prevention is always better than cure, and fire prevention is always better than fire fighting. Tidiness is of paramount importance in reducing the possibility of outbreaks of fire. Fires have small beginnings and it is usually amongst accumulated rubbish that many fires originate. So you should make a practice of constantly removing rubbish, shavings, off-cuts, cans, bottles, waste paper, oily rags, and other unwanted materials to a safe place at regular intervals. Discarded foam plastic packing is not only highly flammable, but gives off highly dangerous toxic fumes when burnt. Highly flammable materials, such as the gases used for welding, brazing and flame-cutting processes, should be stored in specially designed and equipped compounds away from the main working areas. In the case of paints, adhesives and solvents only minimum quantities of such materials for immediate use should be allowed into the workshop at any one time, and then only into *non-smoking zones*.

The advice of the Local Authority Fire Brigade's fire prevention officer should also be sought.

It is good practice to provide metal containers with air-tight hinged lids with proper markings as to the type of rubbish they should contain since some types of rubbish will ignite spontaneously when mixed. The lids of the bins should be kept closed so that, if a fire starts, it will quickly use up the air in the bin and go out of its own accord without doing any damage.

- **Accidents**

Accidents do not happen, they are caused. There is not a single accident that could not have been prevented by care and forethought on somebody's part. Accidents can and must be prevented. They cost millions of lost man-hours of production every



year, but this is of little importance compared with the immeasurable cost in human suffering. On average, nearly one hundred workers are the victims of industrial accidents in every eight-hour shift. Many of these will be blinded, maimed for life, or confined to a hospital bed for months. At least two of them will die. Figure 1.5 shows the main causes of accidents.

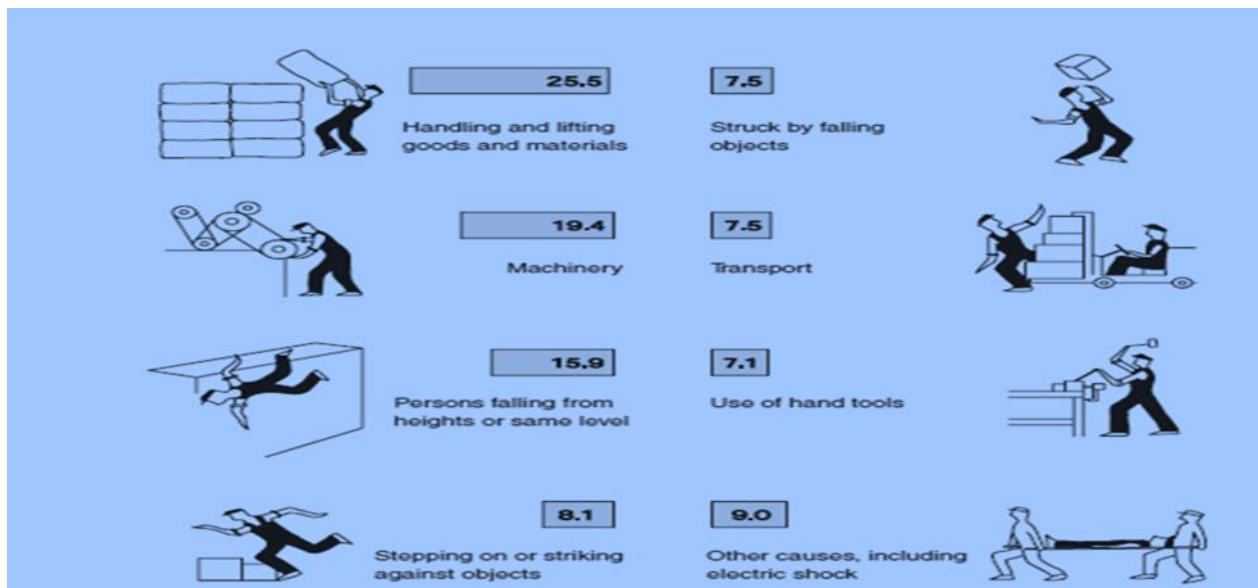


Figure 1.5 Average national causes of industrial accidents (by per cent of all accidents)

- **Accident procedure**

You must learn and obey the accident procedures for your company.

1. Report all accidents, no matter how small and trivial they seem, to your supervisor, instructor or tutor. Record your report and details of the incident on an accident form.

2. Receive first-aid treatment from a *qualified* person, or your company's medical centre, depending upon the size of your company and its policy.

It is important that you follow the procedures laid down by your company since the accident register has to be produced on request by any HSE inspector visiting your company.



Also if at some future date you had to seek compensation as a result of the accident, your report is important evidence

- ✓ Failure to log all accidents is an offence under the Health and Safety at Work etc. Act and can lead to prosecution in the courts

- **Warning signs and labels**

Let's now consider some examples of the signs and labels you may come across in your place of work, commencing with *warning signs*. You must be aware of the warning signs and their meanings. You must also obey such signs. To disregard them is an offence under the Health and Safety at Work etc. Act. Warning signs are triangular in shape and all the sides are the same length. The background colour is *yellow* and there is a *black* border. In addition to warning signs there are also *warning labels*. Figure 1.6 shows some typical warning signs and warning labels. It also gives their meanings.

- **Prohibition signs**

You can recognize these signs as they have a red circular band and a red crossbar on a white background. Fig. shows five typical prohibition signs. These signs indicate activities that are *prohibited* at all times. They *must be obeyed*; you have no option in the matter.



Fig. Warning signs

To disregard them in an *offence in law*, as you would be putting yourself and others at considerable risk.



- **Mandatory signs**

You can recognize these signs as they have a blue background colour. The symbol must be white. Fig. shows five typical mandatory signs. These signs indicate things that *you must do* and precautions that *you must take*. These signs *must be obeyed*; you have no option in the matter. To disregard them in an *offence in law* as, again, you would be putting yourself at considerable risk.

- **Safe condition signs**

In addition to the signs discussed so far that tell you what to look out for, what you should do and what you should not do, there are also signs that tell what is safe. These have a white symbol on a green background. The example shown in Fig. (a) Indicates a first aid post or an ambulance room. Indicates a safe direction in which to travel, e.g. towards an emergency exit.



Fig:- 1.7 Prohibition signs



Figure 1.8 Mandatory signs

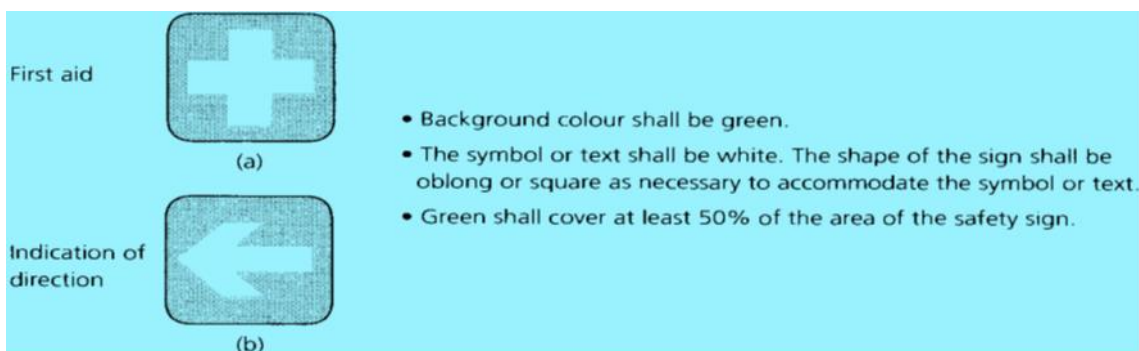




Fig: - 1.9 Safe condition signs

The example shown in Fig. 1.9(b)

Accidents can happen anywhere at any time. The injuries caused by such accidents can range from minor cuts and bruises to broken bones and life threatening injuries.

It is a very good idea to know what to do in an emergency.

- ✓ You must be aware of the accident procedure.
- ✓ You must know where to find your nearest first aid post.
- ✓ You must know the quickest and easiest route to the first aid post.
- ✓ **You** must know who the qualified first-aid person on duty is and where he/she can be found).
- ✓ First aid should only be administered by a qualified person

Unfortunately in this day and age, more and more people are being encouraged to seek compensation through the courts of law. Complications resulting from amateurish but well-intentioned and well-meaning attempts at first aid on your part could result in you being sued for damages. If a qualified person is not immediately available, summon the paramedics by telephoning for the emergency services.

Remember that workshop materials and equipment are, medically speaking, essentially dirty and can easily carry dirt into a wound causing it to become infected. Hence the need for any wound, however minor, to be assessed and treated by a qualified person.



Information Sheet-3	Following road traffic accidents and emergencies.
----------------------------	---

- **Road Traffic and Other Emergencies**

Road traffic injuries: the facts

1.24 million

road traffic deaths occur every year.

#1

cause of death among those aged 15-29 years

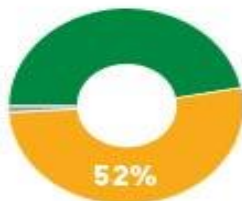


3 out of 4

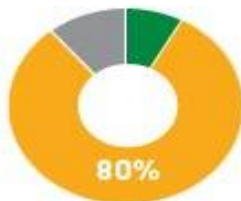
road deaths are among men



Although middle-income countries have only half of the world's vehicles, they have 80% of the world's road traffic deaths.

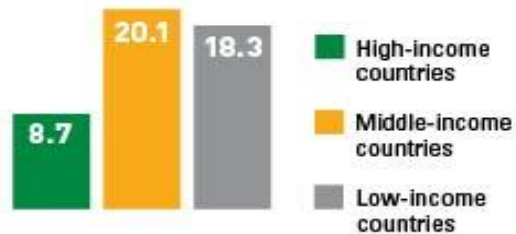


VEHICLES



DEATHS

Middle-income countries have the highest road traffic death rates.

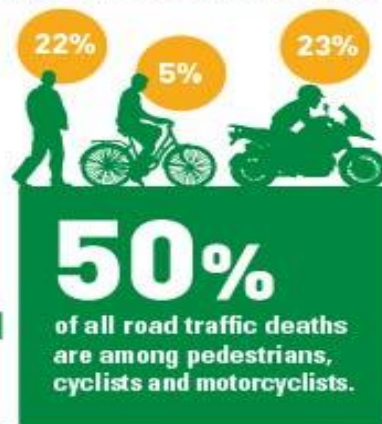


Road traffic fatalities per 100 000 population

The chance of dying in a road traffic crash depends on where you live



Road traffic fatalities per 100 000 population



- Road safety sign



Basic Metal Works



Level-I

Learning Guide#21

Unit of Competence: Implement and Apply

OHS Practice

Module Title: Implementing and Applying

OHS Practice

LG Code: IND BMW1 M6 LO3-LG-19

TTLM Code: IND BMW M6 TTLM 1019v1

LO3:-Contribute to management of OHS in the workplace.

**Instruction Sheet-3****Learning Guide #20**

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Identifying workplace procedures for occupational health and safety
- Following workplace procedures for hazard identification and risk control
- Contributing to management of OHS in the workplace.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to:

- . Workplace procedures and OHS legislation
- . Personnel Protective Equipment (PPE)
- . Demonstrating Preventative OHS procedures.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below.
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” in the information sheets.
5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation proceed to “Operation sheets and LAP Tests if any. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. Then proceed to the next information sheet.



9. If you earned a satisfactory evaluation in each self-check proceed to “Operation Sheets” in pages. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activities.
10. Read the “Operation Sheets” and try to understand the procedures discussed.
12. Do the “LAP test” in each page (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advise you on additional work. But if satisfactory you can proceed to Learning Guide.



- **OHS management**

An occupational health and safety (**OHS**) **management** system encompasses more than just your health and safety program. ... Having an effective **management** system improves your ability to continuously identify hazards and **control** risks in your workplace.

How do you implement a safety management system?

- **Implementing and Operating a Health and Safety Management System**

- ✓ Implement a reporting system.
- ✓ Train workers how to identify and control hazards.
- ✓ Conduct inspections.
- ✓ Collect hazard control ideas.
- ✓ Implement hazard control ideas.
- ✓ Address/anticipate workplace emergencies.
- ✓ Seek input on workplace changes.

- What is OHS How will you implement OHS in your organization?

Establish occupational health and safety policies and **an OHS** program.

Provide general direction to management, supervisors, and workers about **their** responsibilities and roles in providing a safe and healthy workplace. Provide specific direction and delegate authority to those responsible for health and safety.

- What are the key elements of a safety management system?

Most successful occupational health and safety management systems contain the following key elements:

- ✓ A Way to Control and Distribute Up-to-Date Documents.
- ✓ Safety Inspection Checklists.
- ✓ Risk Assessments.
- ✓ Emergency Response Plan.
- ✓ Training Program and Documentation System.
- ✓ Internal Audit Policy and Schedule.



3. Personal Protective Equipment

Employers have duties concerning the provision and use of personal protective equipment (PPE) at work.

PPE is equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. It also includes respiratory protective equipment (RPE).

➤ **Why is PPE important?**

Making the workplace safe includes providing instructions, procedures, training and supervision to encourage people to work safely and responsibly.

Even where engineering controls and safe systems of work have been applied, some hazards might remain.

These include injuries to:

- ✓ the lungs, eg from breathing in contaminated air
- ✓ the head and feet, eg from falling materials
- ✓ the eyes, eg from flying particles or splashes of corrosive liquids
- ✓ the skin, eg from contact with corrosive materials
- ✓ the body, eg from extremes of heat or cold

PPE is needed in these cases to reduce the risk.

• **What do I have to do?**

- ✓ Only use PPE as a last resort
- ✓ If PPE is still needed after implementing other controls (and there will be circumstances when it is, eg head protection on most construction sites), you must provide this for your employees free of charge
- ✓ You must choose the equipment carefully (see selection details below) and ensure employees are trained to use it properly, and know how to detect and report any faults
- PPE therefore (for the purposes of this policy) includes items such as the following when they are worn for purposes of health and safety:-



- ✓ aprons;
- ✓ gloves;
- ✓ protective equipment for adverse weather conditions;
- ✓ safety footwear;
- ✓ hard hats;
- ✓ high visibility waistcoats;
- ✓ eye and face protection;
- ✓ lab coats;
- ✓ face masks; and
- ✓ ear defenders

- ***Selection and use***

You should ask yourself the following questions:

- ✓ Who is exposed and to what?
- ✓ How long are they exposed for?
- ✓ How much are they exposed to?
- When selecting and using PPE:
 - ✓ Choose products which are CE marked in accordance with the Personal Protective Equipment Regulations 2002 – suppliers can advise you
 - ✓ Choose equipment that suits the user – consider the size, fit and weight of the PPE. If the users help choose it, they will be more likely to use it
 - ✓ If more than one item of PPE is worn at the same time, make sure they can be used together, eg wearing safety glasses may disturb the seal of a respirator, causing air leaks
 - ✓ Instruct and train people how to use it, eg train people to remove gloves without contaminating their skin. Tell them why it is needed, when to use it and what its limitations are

Where PPE is used, it must:

- ✓ be selected taking into account the nature of the hazard and the task;



- ✓ be provided free of charge to employees;
- ✓ carry a European Conformity (EC) or British Standard (BS) mark;
- ✓ be maintained in an efficient working order and in good repair;
- ✓ be compatible with other PPE;
- ✓ be stored in an assigned and suitable area with easy access;
- ✓ be provided in conjunction with appropriate instruction and training to the wearer;
- ✓ Be disposed of in accordance with the Infection Control Manual

- **Other advice on PPE**

- ✓ Never allow exemptions from wearing PPE for those jobs that 'only take a few minutes'
- ✓ Check with your supplier on what PPE is appropriate – explain the job to them
- ✓ If in doubt, seek further advice from a specialist adviser

- **Maintenance and Replacement of PPE**

PPE must be maintained and replaced in accordance with the manufacturer's advice where appropriate, and a record maintained by the manager. Departments must devise written procedures for any necessary maintenance of PPE including cleaning, disinfecting, examination, repair, replacement, and testing

These procedures must detail the extent and frequency of maintenance, and the names of responsible individuals. The use of disposable or single use PPE avoids the need to devise and carry out such procedures, but the manufacturer's information must be passed on to users so that they can recognize when to discard and replace equipment.

PPE must be properly looked after and stored when not in use, eg in a dry, clean cupboard. If it is reusable it must be cleaned and kept in good condition.

Think about:

- ✓ using the right replacement parts which match the original, eg respirator filters
- ✓ keeping replacement PPE available
- ✓ who is responsible for maintenance and how it is to be done
- ✓ having a supply of appropriate disposable suits which are useful for dirty jobs where laundry costs are high, e.g. for visitors who need protective clothing

Employees must make proper use of PPE and report its loss or destruction or any fault in it.



- **Monitor and review**

- ✓ Check regularly that PPE is used. If it isn't, find out why not
- ✓ Safety signs can be a useful reminder that PPE should be worn
- ✓ Take note of any changes in equipment, materials and methods – you may need to update what you provide

- **Types of PPE you can use**

Eyes Hazards

Chemical or metal splash, dust, projectiles, gas and vapor, radiation Options

Safety spectacles, goggles, face screens, face shields, visors

Note

Make sure the eye protection chosen has the right combination of impact/dust/splash/molten metal eye protection for the task and fits the user properly

Head and neck Hazards

Impact from falling or flying objects, risk of head bumping, hair getting tangled in machinery, chemical drips or splash, climate or temperature

Options

Industrial safety helmets, bump caps, hairnets and firefighters' helmets

Note;-

- ✓ Some safety helmets incorporate or can be fitted with specially-designed eye or hearing protection
- ✓ Don't forget neck protection, e.g. scarves for use during welding
- ✓ Replace head protection if it is damaged

Ears Hazards

Noise – a combination of sound level and duration of exposure, very high-level sounds are a hazard even with short duration

Options

Earplugs, earmuffs, semi-insert/canal caps

Note

- ✓ Provide the right hearing protectors for the type of work, and make sure workers know how to fit them
- ✓ Choose protectors that reduce noise to an acceptable level, while allowing for safety and communication.



Hands and arms Hazards

Abrasion, temperature extremes, cuts and punctures, impact, chemicals, electric shock, radiation, vibration, biological agents and prolonged immersion in water

Options

Gloves, gloves with a cuff, gauntlets and sleeping that covers part or all of the arm

Note :-Avoid gloves when operating machines such as bench drills where the gloves might get caught .

- ✓ Some materials are quickly penetrated by chemicals – take care in selection,
- ✓ Barrier creams are unreliable and are no substitute for proper PPE
- ✓ Wearing gloves for long periods can make the skin hot and sweaty, leading to skin problems. Using separate cotton inner gloves can help prevent this

Feet and legs Hazards

Wet, hot and cold conditions, electrostatic build-up, slipping, cuts and punctures, falling objects, heavy loads, metal and chemical splash, vehicles

Options

Safety boots and shoes with protective toecaps and penetration-resistant, mid-sole wellington boots and specific footwear, eg foundry boots and chainsaw boots

Note

- ✓ Footwear can have a variety of sole patterns and materials to help prevent slips in different conditions, including oil - or chemical-resistant soles. It can also be anti-static, electrically conductive or thermally insulating
- ✓ Appropriate footwear should be selected for the risks identified

Lungs Hazards

- ✓ Oxygen-deficient atmospheres, dusts, gases and vapours

Options – respiratory protective equipment (RPE)

- ✓ Some respirators rely on filtering contaminants from workplace air. These include simple filtering face pieces and respirators and power-assisted respirators
- ✓ Make sure it fits properly, eg for tight-fitting respirators (filtering face pieces, half and full masks)
- ✓ There are also types of breathing apparatus which give an independent supply of breathable air, eg fresh-air hose, compressed airline and self-contained breathing apparatus



Note

- ✓ The right type of respirator filter must be used as each is effective for only a limited range of substances
- ✓ Filters have only a limited life. Where there is a shortage of oxygen or any danger of losing consciousness due to exposure to high levels of harmful fumes, only use breathing apparatus – never use a filtering cartridge
- ✓ You will need to use breathing apparatus in a confined space or if there is a chance of an oxygen deficiency in the work area
- ✓ If you are using respiratory protective equipment, look at HSE's publication Respiratory protective equipment at work: A practical guide

Whole body Hazards

Heat, chemical or metal splash, spray from pressure leaks or spray guns, contaminated dust, impact or penetration, excessive wear or entanglement of own clothing

Options

Conventional or disposable overalls, boiler suits, aprons, chemical suits

Note

- ✓ The choice of materials includes flame-retardant, anti-static, chain mail, chemically impermeable, and high-visibility
- ✓ Don't forget other protection, like safety harnesses or life jackets

Emergency equipment

Careful selection, maintenance and regular and realistic operator training is needed for equipment for use in emergencies, like compressed-air escape breathing apparatus, respirators and safety ropes or harnesses.



Preventative OHS Procedures are demonstrated throughout all scope of work, and with regards to workplace standards and regulations.

In the workplace may be demonstrated by:

- ✓ Identifying opportunities to avoid hazards that are not obvious to others
- ✓ Initiating changes to procedures and processes to avoid or reduce the risk of hazards in the workplace



Self Check 1

1. What is Occupational Health?

- A. Public health practice controlling chemical factors in the workplace that may that may adversely affect human health.
- B. Public health practices aiming to balance all the working conditions and environment in the workplace setting.
- C. Public health practice aiming to prevent work-related affections and promote wellbeing in the workplace setting.*
- D. Public health practice controlling workplace infections by educating the workers on health preventive measures.

2. State which categories of occupational hazards would a worker in a hospital ward is exposed to in his day to day work of dressing wounds.

- A. Physical hazards
- B. Ergonomic hazards
- C. Chemical hazards
- D. Biological hazards*

3. State the type of occupational hazard that frustrated workers, complaining about being shifted around various activities without due consideration as to their abilities, may be exposed to reports to your office.

- A. Ergonomic hazards
- B. Physical hazards
- C. Psychosocial hazards*
- D. Chemical hazards

4. Clarify what a hazardous agent is.

- A. An individual who ensures hazardous factors in the workplace are easily identified with no harm to other workers.
- B. A worker who has recovered from injuries resulting from workmanship and working conditions in a factory.
- C. Factors that may cause harm workers in the workplace without affecting equipment used in the workplace.
- D. Circumstance in a workplace that may transmit possible harmful effects without being affected.*



5. Indicate the statement that explains “Health and Safety” in terms of Occupational Health.

A. Ensuring that worker’s capabilities are matched with the respective jobs they are engaged in.

B. Ensuring that standards of wellbeing at the workplace are being maintained to prevent injuries and infections.*

C. Conducting surveillance of work environment that may have effect on the wellbeing of workers.

6. _____ is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.

7. _____ repetitive movements, improper set up of workstation,

8. _____ is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard.

9. How do you implement a safety management system?

10. What are the key elements of a safety management system?

Part one Answer sheet.

1. C

2. D

3. C

4. D

5. B

6. Hazard

7. Ergonomic

8. Risk

9.

✓ Implement a reporting system.

✓ Train workers how to identify and control hazards.

✓ Conduct inspections.



- ✓ Collect hazard control ideas.
- ✓ Implement hazard control ideas.
- ✓ Address/anticipate workplace emergencies.
- ✓ Seek input on workplace changes.

10.

- ✓ A Way to Control and Distribute Up-to-Date Documents.
- ✓ Safety Inspection Checklists.
- ✓ Risk Assessments.
- ✓ Emergency Response Plan.
- ✓ Training Program and Documentation System.
- ✓ Internal Audit Policy and Schedule.

Reference Book

1. Fundamental principles of occupational health and safety
2. WWW.google.com