Crop Production-Level-III

Based on March 2018, Version 3 Occupational standards

Module Title: Responding to crop production emergencies

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East Africa Skills for Transformation and Regional Integration Project (EASTRIP

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G #51	LO #1- Prepare for crop production emergency situations

Instruction sheet

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

- Taking appropriate actions to maximize safety and minimize health hazards
- Identifying and evaluating options for action
- Implementing organizational crop production emergency procedures and policies
- Applying OHS procedures and safe working practices
- Carrying out regular checks of the workplace
- Carrying out crop production emergency procedures
- Selecting, using, maintaining and storing safety equipment and aids required
- Reporting and documenting near misses and potential hazards

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

- Take appropriate actions to maximize safety and minimize health hazards
- Identify and evaluating options for action
- Implement organizational crop production emergency procedures and policies
- Apply OHS procedures and safe working practices
- Carry out regular checks of the workplace
- Carry out crop production emergency procedures
- Select, using, maintaining and storing safety equipment and aids required
- Report and documenting near misses and potential hazards

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” which are placed following all 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).

Information Sheet 1- Taking appropriate actions

1. Introduction

An emergency is any situation or occurrence of a serious nature, developing suddenly and unexpectedly, and demanding immediate action. When there is a fire, flood, or tornado emergency in a community, there are local responders at the ready to safeguard the public. If the emergency is beyond what local Police, Fire, or Emergency Management Systems can handle, then state resources are deployed. In contrast, there is currently no established local authority to command or manage an agricultural emergency response, so a response to an agricultural emergency that threatens to destroy crops or animals is not carried out with the same level of efficiency even though it requires a rapid and coordinated response from the outset.

1.1.1. Types of Emergencies

- Typical emergencies

✓ Fires
✓ Spills
✓ Critical injuries
✓ Explosions
✓ Heart attacks and strokes
✓ Transportation incidents
✓ Power or fuel loss
✓ Workplace violence
✓ Bomb threats
✓

- Natural disasters

✓ Ice storms and snow
✓ Tornadoes and severe storms (high rain or winds)
✓ Floods
✓ Earthquake

- Emergencies May Have Severe Consequences

✓ Employee health and safety
✓ Insurance costs
✓ Negative media attention
✓ Public pressure
✓ Liability
✓ Convictions and fines

According to the crop production plan, which include all activities like site selection, land preparation and up to storing the crop yield the planned activity should be implemented by its on time,method,machinery,equipment,material and skilled human labor.

Self-check 1	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts each.

1. Define Emergency (5 points)

2. Mention occupational health and safety requirement (5 points)?

Note: Satisfactory rating - 10 points **Unsatisfactory - below 10 points**

Information Sheet 2- Identifying and evaluating options for action

2.1. Methods of assessing situation

To explore how to effectively manage emergency situations via a more cohesive, multilevel, multiagency response that maintains continuity of business, the impacts of historical agricultural disasters were searched and studied to form an initial assessment of past events. Challenges were subjectively identified and illustrated based on the outline of hypothetical outbreak of foot-and-mouth disease in the United States. Impacts of the hypothetical outbreak were assessed via observing how known animal movements and operations would be affected and how the scale, illustrated by industry statistics, would factor into the total impact. Historical examples of other animal and food related disasters were collected from literature based on impact observed. Literature searches were completed using relevant search terms and concepts in English only. Events were included based on relevance of economic damages.

2.1.1. Evaluate Effectiveness of the Plan

Conduct an annual review

A review is best done in conjunction with an annual drill. The drill will likely identify weaknesses and recommend actions for improvement. Management and employee health and safety representatives should participate in all steps including the annual review of the plan.

- **Review & analyze**

✓ All incidents that occurred in the past year;

✓ All corrective actions taken following any incidents;

✓ All corrective actions taken following any drill or exercise;

✓ Details of specific changes that have occurred in the workplace;

✓ Details of any changes to prevention-based policies or procedures; and

✓ The risk assessment on which the plan is based.

2.1.2. Emergency risk management

Emergency risk management is “a systematic process that produces a range of measures that contribute to the well being of communities and the environment”.

It includes:

- ✓ Context definition;
- ✓ Risk identification;
- ✓ Risk analysis;
- ✓ Risk evaluation;
- ✓ Risk treatment;
- ✓ Monitoring and reviewing; and,
- ✓ Communicating and consulting.

2.2.1. Basis for prioritizing animal emergency (risks)

The following are the criteria used for prioritization of risks.

Seriousness, Manageability, Acceptability, Urgency, Growth (SMAUG)

Seriousness: This includes the potential for lives to be lost and potential for injury as well as the physical, social and as mentioned, economic losses that may be incurred

Manageability: The "relative ability to mitigate or reduce the hazard (through managing the hazard, or the community or both)". Hazards presenting a high risk and as such requiring significant amounts of risk reduction initiatives will be rated high.

Acceptability: The degree to which the risk of hazard is acceptable in terms of political, environmental, social and economic impact

Urgency: This is related to the probability of risk of hazard and is defined in terms of how imperative it is to address the hazard.

Growth: This is the potential for the hazard or event to expand or increase in either probability or risk to community or both. Should vulnerability increase, potential for growth may also increase.

- **Options for action in handling emergency cases**
  - ✓ Remain calm. Emergencies require rapid action; the most important factor in effectively handling the situation is to keep calm.
  - ✓ Seek additional help. Call for emergency assistance. Use whatever number is applicable to call emergency services.
  - ✓ Determine the nature of the emergency.
  - ✓ Know that sudden changes can be emergencies
  - ✓ Assess the immediate threat. Remove yourself from danger
  - ✓ Go to an area where you will be safe
  - ✓ Safely assist someone else in leaving a dangerous situation

Self-Check – 2	

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5pts each

1. Explain the methods of assessing situation
2. What is emergency risk management

Note: **Satisfactory rating - 10points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

Information Sheet- 3 Implementing organizational crop production emergency procedures and policies.

3.1. Implementing emergency procedures and policies

Agriculture is one of the most dangerous occupations. Many people are injured and some are killed each year when working with livestock. Children and older people are most likely to be injured by livestock. Many environmental factors play a part in farm accidents. Facilities especially silo and confinement livestock buildings should be checked for safety otherwise the danger is serious. Protective equipments should be worn when necessary. The emergency plan should be publicized within each establishment and readily available to relevant personnel.

Procedures for dealing with emergencies should identify such things as:

- ✓ After hours contact details (for example for researchers, on duty veterinarian, Chairperson, building maintenance, authorities for fire, water and gas leaks);
- ✓ Means of detecting and dealing with power failures and breakdown in equipment such as ventilation, filtration or watering systems (including the provision of temporary services until the breakdown is rectified);
- ✓ Evacuation procedures and emergency accommodation for crops
- ✓ Security of data, records and samples.

Consider the types of incident and possible impacts on land of crop cultivation and storage in an artificially maintained environment:

Fires - Consider the likely effect of a bushfire or structural fire affecting the land of cultivation and/or nearby grain storage structures.

Floods - For susceptible sites, consider the effect of generalized flooding affecting the whole of the site or areas of cultivation crops and storage. For any site, consider which crop production and storage, areas could be involved in (and the likely effects of) localized flooding from sources such as heavy rain entering storm damaged roofs, water accumulating due to blocked drains or downpipes and accidental escape of water from leaking storage tanks, burst supply pipes or defective fire sprinklers.

Power failure - May be due to fire, flood, storm or other damage to local infrastructure or main supply trunks remote from your site. Consider the effects of a prolonged power outage on air-conditioning, ventilation, water reticulation, filtration and waste disposal systems. Can essential services to the grain storage rooms be maintained? What are the specific problems and solutions if a failure is limited to particular rooms in a single building or if it is more generalized, affecting a group of buildings or the entire site?

Hazardous spills or leaks - Consider what other events such as gas leaks; chemical, radioactive or biological spills may pose a risk to animals either directly by exposure to the hazardous materials or indirectly, by preventing access of human carers into the facility. Consider how an event such as this in a laboratory area may impact upon the animal housing facilities in the same building. An integrated set of policies and procedures that allows you to prepare for, respond to and recover from emergency incidents.

Emergency response procedures

- Response procedures are steps you can take to:

✓ Control the event; and

✓ Minimize the consequences.

- **The procedures developed must:**

✓ Be specific to the incident type;

✓ Be flexible to allow for a changing scenario;

✓ Provide the resources to deal with the situation;

✓ Identify the source of critical resources; and

✓ Identify procedures to activate appropriate resources

Depending on your objectives and scope, you may develop response procedures for fire, spill, medical emergency, incident and other possibilities. Ensure that the procedures comply with applicable acts and regulations.

Self-Check – 3	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts each

1. What is emergency response procedures
2. List the condition of the developed procedures should have to accomplish

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

4.1. Definition of terminologies:

Emergency: is a dangerous or serious situation such as accident that happens suddenly or unexpectedly and needs immediate action

Injuries: is a hurt or damage on the parts of body of living things. It includes shock, external bleeding, poisoning, bites & stings.

Hazard: is something risky and likely to cause harm. It could be due to biological, chemical, mechanical, electrical, thermal, harm full insects and explosive fire etc.

Work Place Procedure: is s an order or method of doing something in the work places.

Personal Protective Equipments: are equipments or materials that are essential or necessary or safe activity.

Disaster: harmful or destructive event**:** an event that causes serious loss,

First aid: The initial administration of care for an injured crop until more thorough veterinary attention inspecting, monitoring the condition of the crop.

4.2. OHS procedures

Most work places have safety rules that are designed to protect the health and safety of workers and customers. Employee has to learn and follow the safety practices required for the job. Failure to do so may result in injury to oneself or to others in the workplace. Employers expect workers to practice safe work habits on the job. OHS requirements always must be applied in accordance with regulations/codes of practice and enterprise safety policies and procedures.

- This occupational health and safety requirement include:
  - ✓ Using of relevant protective clothing and equipment, such as
    - ❖ Overalls
    - ❖ Gloves
    - ❖ Safety goggles
    - ❖ Boots/shoes

- ❖ Sunhats
- ❖ Overall(gowns)
- ❖ Helmets and other.

✓ Use of tools and equipment,

✓ Workplace environment and safety handling of material,

✓ Use of first aid kit if necessary

✓ Controlling Hazard and hazardous materials or substances.

✓ Following Occupational health and safety procedure designated for the task

✓ Checking and fulfilling required safety devices before starting operation

✓ Apply safe operating procedures regarding:

- ❖ Electrical safety,
- ❖ Machinery movement and operation,
- ❖ Working in proximity to others and site visitors,
- ❖ Working in proximity to crop,
- ❖ Ammonia toxicity
- ❖ Work notes.

Instructions and directions provided by supervisor must be followed and if employee or worker has any question we can ask when necessary. and also employee must observe and follow Enterprise policies and procedures in relation to workplace practices in the handling and disposal of materials.

4.2.1. Safe work practices

Safe work practices are generally written methods outlining how to perform a task with minimum risk to people, equipment, materials, environment, and processes. Safe work practices should be developed as a result of completing a Hazard Assessment and should closely reflect the activities most common in the company's type or sector of construction. All safe work practices should be kept in a location central to the work being performed and readily available to the workforce. Some safe work practices will require specific job procedures, which clearly set out in a chronological order each step in a process.

Self-Check – 4	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts each

1. Define the following terms:
   A. Emergency
   B. Injuries,
   C. Hazard and
   D. Disaster
2. Explain work procedures, PPE and first aid

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information Sheet 5- Carrying out regular checks of the workplace

5.1. Requirements of checking of the workplace

The monitoring and review of preventative and protective measures is a requirement of the Management of Health and Safety at Work Regulations for which routine workplace health and safety inspections are to be conducted to check that such measures are in place and effective. Workplace health and safety inspections cover specific selected work areas within an organization or workplace and should not be confused with health and safety audits of a safety management system (SMS). All workplace inspections should be recorded as evidence of legal compliance with the requirement to monitor and review preventative and protective measures and may form part of an audit trail demonstrating that appropriate arrangements are in place for active monitoring of the SMS.

The aim of workplace health and safety inspections is to prevent work related accidents and ill health by identifying new hazards; and checking that preventative and protective control measures are implemented and effective. Workplace inspections need to take account of premises, plant, housekeeping, procedures, activities and substances, and therefore may need to be undertaken in concert with other stakeholders (e.g. accredited Trades Union safety reps, employee elected safety representatives, site estates personnel and / or contractors, etc).

Workplace inspections offer Defence personnel and managers an opportunity to share their knowledge and experience helping the inspection process and should be encouraged in line with Health and Safety Executive (HSE) drive to increase worker involvement.

Roles and Responsibilities

Managers

The manager should ensure that regular workplace health and safety inspections are carried out within their identified area(s) of responsibility by competent persons1. Where practical any safety representatives (TU or staff elected) who cover the area / personnel involved should be informed of the planned workplace inspections and invited to participate. All deficiencies identified must be acted upon in a timely manner. Where practical, managers are encouraged to co-ordinate all interested parties to conduct joint inspections of their area to minimize "over regulation" and help to resolve any grey areas where responsibility is either shared or not clearly defined.

The following list provides some practical guidance to help complete crop production workplace checking in the most effective manner:

- ✓ Throughout the inspection, refer to the interaction between: people, processes, premises, plant and substances;
- ✓ Use an inspection checklist as an aide, but do not let it limit the scope of the inspection;
- ✓ Review competencies and training requirements / records for staff;
- ✓ Check risk assessments, equipment documentation and maintenance records;
- ✓ Talk to as many personnel as possible, listen to their observations / problems and suggestions;
- ✓ Expect people to be on their best behaviour; beware of false impressions;
- ✓ Do not get distracted by trivial risks or issues;
- ✓ Look for potential shortcuts in work procedures or deviations from good practice;
- ✓ Take account of both normal and potential abnormal work conditions and activities; and
- ✓ Where possible, put remedial measures in place immediately.

Retention of Records

Records should be maintained of any workplace health and safety inspections undertaken (copied to the appropriate Safety Representatives) including any inspection notes and checklists raised, as well as any formal post-Inspection Reports and Action Plans produced; these should be retained for a period of at least three years. It is

recommended that copies of any work services request; equipment or material demands, and training support requests are kept as evidence of action taken. These records should include, as appropriate, the dates of submission, review, any hastening action, and the completion of tasks.

Self-Check – 5	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 pts each

1. Explain the regular checks of the workplace

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

6.1 Apply emergency procedures

Different types of events which can cause similar functional disturbances that necessitate a planned and coordinated emergency response.

Emergencies that may be encountered include: fire, flood, power failure, contaminated feed or water, disease or injury, escapes, gas leaks, inclement weather, damage from wind, lightning and storm, road accidents, water failure and security threats.

Prepare an emergency plan

An emergency plan is a written set of instructions that outlines what workers and others at the workplace should do in an emergency.

An emergency plan must provide for the following:

- ✓ emergency procedures, including: an effective response to an emergency
- ✓ evacuation procedures
- ✓ notifying emergency service organizations at the earliest opportunity
- ✓ medical treatment and assistance, and
- ✓ effective communication between the person authorized to coordinate the emergency response and all people at the workplace
- ✓ testing of the emergency procedures—including the frequency of testing, and
- ✓ Information, training and instruction to relevant workers in relation to implementing the emergency procedures.

6.1.1. Identify types of emergencies

The types of emergencies to plan for may include fire, explosion, medical emergency, rescues, and incidents with hazardous chemicals, bomb threats, armed confrontations and natural disasters. The emergency plan should be based on a practical assessment of hazards associated with the work activity or workplace, and the possible consequences of an emergency occurring as a result of those hazards. External hazards should also be considered in preparing an emergency plan, for example a chemical storage facility across the road.

In developing the plan, consideration should be given to the application of all relevant laws, including public health laws (for example, workplaces that are also public places) and state or territory disaster plans.

In preparing an emergency plan, all relevant matters need to be considered including:

- ✓ the nature of the work being carried out at the workplace
- ✓ the nature of the hazards at the workplace
- ✓ the size and location of the workplace, for example, remoteness, proximity to health services, and
- ✓ The number and composition of the workers, for example, employees, contractors, and other persons at the workplace such as visitors.

An emergency plan may include practical information for workers such as:

- ✓ emergency contact details for key personnel who have specific roles or responsibilities under the emergency plan
- ✓ contact details for local emergency services, for example police, fire brigade
- ✓ evacuation procedures including arrangements for assisting any hearing, vision or mobility-impaired people
- ✓ a map of the workplace illustrating the location of fire protection equipment, emergency exits, assembly points
- ✓ Procedures for testing the emergency plan including the frequency of testing must be included.

6.2. Requirements for higher-risk workplaces

Higher-risk workplaces may require additional information in their emergency plans. Examples of these workplaces include:

- ✓ workplaces with confined spaces
- ✓ workplaces that use fall arrest harness systems
- ✓ Major Hazard Facilities and mines
- ✓ workplaces that store or handle hazardous chemicals, and
- ✓ Workplaces that carry out demolition and refurbishment sites.

6.2.1. Training in emergency procedures

Workers must be adequately trained in emergency procedures. Arrangements for information, training and instruction of workers must be set out in the emergency plan itself. Training may include practicing evacuations, identifying assembly points, location of emergency equipment, first aid arrangements and how to safely shut down machinery.

In determining training requirements, the following should be considered:

- ✓ inclusion of emergency procedure training in induction courses for new workers
- ✓ provision of refresher training for existing workers
- ✓ provision of training for short-term contractors or visitors at the workplace (this may not need to be as extensive as may be required for workers), and
- ✓ Provision of specific training for individuals who have a formal role in an emergency for example fire wardens, floor wardens, first aid officers.

Reviewing emergency plans

For emergency plans to remain current and effective they must be reviewed and revised (if necessary) on a regular basis. For example:

- ✓ when there are changes to the workplace such as re-location or refurbishments
- ✓ when there are changes in the number or composition of staff including an increase in the use of temporary contractors
- ✓ when new activities have been introduced, and
- ✓ After the plan has been tested.

Self-Check – 6	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts each

Write all relevant matters need to be considered in preparing an emergency plan (6points)

1. List down information required for higher-risk workplaces (4points)

3. Mention points to be considered in determining training requirements for emergency procedures (5points)

Note: **Satisfactory rating – 15 points** **Unsatisfactory - below 15 points**

You can ask you teacher for the copy of the correct answers.

Information Sheet 7- Selecting, using, maintaining and storing safety equipment and aids required

7.1. Personal Protective Equipment

It is important to use the correct protective clothing and equipment. Wearing personal protective equipment (PPE) can prevent accidents from happening. As a worker, you are responsible for the following:

- ✓ Making sure your uniform is well fitted.
- ✓ Keeping all uniforms clean and in good condition, not frayed or badly worn.
- ✓ Making sure sleeves are kept cuffs on overalls and trousers are be eliminated, and trouser legs are long enough to hang outside boots.
- ✓ Wearing specific personal safety equipment such as goggles, hearing protection, gloves, and aprons when required.

To ensure that you are protecting yourself, your personal protective equipment (PPE) list should include the following items:

- ✓ Making sure your uniform is well fitted.
- ✓ Keeping all uniforms clean and in good condition, not frayed or badly worn.
- ✓ Making sure sleeves are kept cuffs on overalls and trousers are be eliminated, and trouser legs are long enough to hang outside boots.
- ✓ Wearing specific personal safety equipment such as goggles, hearing protection, gloves, and aprons when required.

To ensure that you are protecting yourself, your personal protective equipment (PPE) list should include the following items.

Figure 7.1 Foot wears (Boots)

The OHS Regulation requires that approved footwear must be worn by employees in all industrial occupations. Ensure your footwear is sturdy and provides enough back support to not cause future back problems. Footwear suitable for commercial foodservice establishments must have a non-slip sole and a closed toe and closed back.

Your footwear should be sturdy and comfortable, and if the environment you work requires steeled toes, such footwear should be worn. High leather tops on shoes are a good idea as they will protect your feet from hot grease or liquids.

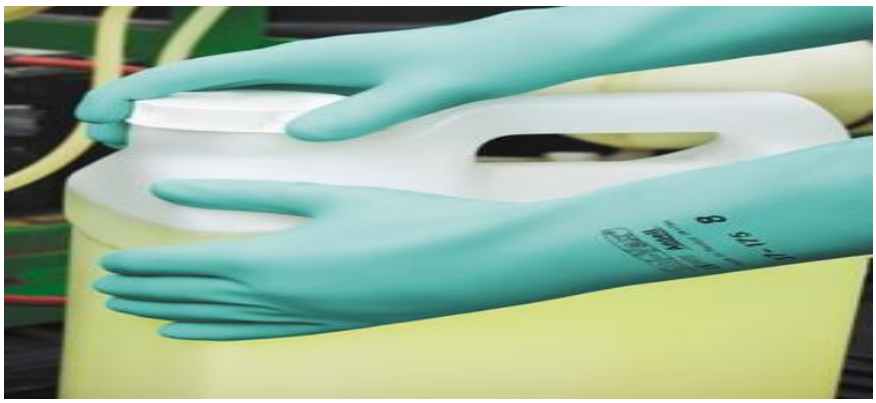

Figure 7.2 Hand protections (Gloves)

The most common type of gloves used is natural rubber latex gloves, synthetic rubber gloves, and vinyl gloves. As it is impossible to distinguish between natural and synthetic rubber gloves simply by looking at them, some people may have an allergic reaction (known as dermatitis) or a more serious reaction known as anaphylaxis to the natural latex glove, and for this reason natural latex gloves are not recommended such kind of person. Mesh gloves should be used when cleaning the meat slicer. Thick plastic, gloves should be used when handling cleaning products.

Figure 7.3 **Eye protections (Safety goggles)**

Eye protection in the form of safety goggles or masks should be worn whenever there is a chance of eye injury. Particles flying through the air can easily land in your eye and possibly do permanent damage. Eye protection is important, for example, when working with the band saw cutting through bone or when working with corrosive cleansers that could splash into your face.

Figure 7.4 Hearing protection

Approved hearing protection must be worn when high-level noise conditions exist. These conditions are not common in commercial kitchens but may be present in food manufacturing operations.

Respiratory protection

Respirators should be used to protect you from inhaling harmful fumes or vapours. The respirator unit should be properly fitted to provide the best protection. Check the components to ensure they are not broken, cracked, or torn and that they do not have holes. Replace faulty components before use. Each unit will have a filter that should be checked regularly and replaced before the expiration date.

First Aid Tools

Every farm and enterprise should have a basic first aid kit that is easily accessible in times of crisis. Depending on personal preference, a basic first aid kit can be bought preassembled or each item can be purchased individually. Regardless, there are basic items any first aid kit should include.

Figure 7.5.Body protection

Self-Check -7	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Mention all PPE and their use? (5 PTS)
2. Explain the importance of each?(5)

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

Information sheet- 8 Reporting and documenting near misses and potential hazards

8.1. Accident Reporting Policy and Procedure

There must be a process put in place to report accidents, incidents or near misses for immediate action and to help track causes. The organization needs to identify what needs to be reported, to whom it is to be reported, and how to report it, then put this process into a written procedure.

For example:

Any accident, incident, or "near miss," no matter how slight the injury or damage, must be reported to the department supervisor immediately for appropriate action. The supervisor is responsible for taking appropriate follow-up action, including getting medical attention for the injured, completing an investigation report and recommending or implementing appropriate corrective actions.

The primary purpose of the accident investigation is to identify the cause(s) of the accident, incident or "near miss" and take action to prevent a similar occurrence in the future. In some instances, an employee's or volunteer's failure to follow recognized safety procedures requires disciplinary action to protect co-workers.

Remember: One person's actions can jeopardize the safety of others in the workplace.

Disciplinary Program

A disciplinary program can be developed with the assistance of the personnel department and the organization's attorney. Such a program can be effective for addressing "repeat offenders" who often account for a high percentage of accidents, incidents and near misses. The nature of the disciplinary action should be in line with such factors as severity, prior history, adequacy of prior training, and length of service to the organization and time on this job.

For example, general guidelines will call for:

- ✓ First offense — counseling/retraining/written warning
- ✓ Second offense — suspension
- ✓ Third offense — dismissal

Emergency and potential emergency situation reports

- Some of the emergency signals and ways of reporting are;

- ✓ observation
- ✓ verbal
- ✓ emergency warning system
- ✓ emergency alarm system
- ✓ hand signals
- ✓ verbal reports
- ✓ telephone communications
- ✓ radio communications
- ✓ whistles

8.1.1. Identifying Potential Emergency Situations

The first requirement of this element of the Standard is to identify all conceivable incidents, accidents, and emergencies under normal operating conditions, and during situations such as start-up, shut-down, other circumstances when operations are not at equilibrium, and events outside the organization's control. Various strategies can be used to arrive at a catalogue of potential emergency situations, including:

- ✓ Review incident records for the past five years
- ✓ Check statistics on the types of incidents and emergencies that have occurred, their locations, times of the day, shifts, operating and weather conditions, and other critical factors
- ✓ Review the environmental aspects list for potential emergencies under abnormal operating conditions
- ✓ With a group of individuals from various functional areas in the organization, brainstorm possible incidents and emergencies.

Situations that could lead to workplace emergencies may include:

- ✓ Deficient or ineffective security arrangements
- ✓ Failure to follow safe practices

- ✓ Fire/smoke hazards
- ✓ Poor maintenance
- ✓ Unreported faults
- ✓ Unsafe practices
- ✓ Unsafe storage and handling of dangerous goods and hazardous materials
- ✓ Unsafe use of electrical or mechanical equipment

Self-Check -8	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Give short answer

1. Discus emergency and potential emergency situation reports (10 pts).

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

LG #52	LO #2- Implement crop production emergency prevention and

Instruction sheet

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

- Minimizing fire hazards
- Using appropriate fire extinguishers and fire fighting equipment
- Following evacuation procedures
- Carrying out specific safety procedures and use of industrial gases
- Minimizing drought hazards and implementing measures
- Identifying pests and diseases
- Identifying and controlling the most dangerous plant pests
- Considering unexpected floods resulting from abnormally heavy rainfall
- Understanding hurricanes, tornadoes, tropical storms and cyclones

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

- Minimize fire hazards
- Use appropriate fire extinguishers and fire fighting equipment
- Follow evacuation procedures
- Carry out specific safety procedures and use of industrial gases
- Minimize drought hazards and implementing measures
- Identify pests and diseases
- Identify and controlling the most dangerous plant pests
- Consider unexpected floods resulting from abnormally heavy rainfall
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Information Sheet 1- Minimizing fire hazards

1.1. Fire hazards of working area

Working condition that can lead to illness or death, often, people in jobs which pose a high level of risk are paid more than similar but less risky jobs to compensate for the danger involved. It may be expressed as “Dangerous event or situation that may lead to an emergency or disaster. It could also be a biological, chemical, or physical agent in (or a property of) an environment that may have an adverse health effect, or may cause injury or loss. As such, a hazard is a potential and not an actual possibility.”

- **Procedures of Minimization of Fire hazards during fire happen**

✓ Response to fire alarm

Fire alarm bells, bells strobes will be activated by pulling a fire alarm pulling or

By automatic detection of smoke, heart, or sprinkler water flow

✓ **If your fire alarm sounds**

- ❖ Evacuate the building immediately and proceed to the designated assembly area
- ❖ Before opening any door, check the door and the handle temperature with the back of your hand
- ❖ Never open doors that are warm to the touch. If a door or handle is warm, than use alternative routes
- ❖ If smoke, heat or flames block your exit routes, stay in the room with the doors closed. Please a wet towel under the door, if available.
- ❖ Open a window and wave a brightly colored cloth or flashlight to signal for help
- ❖ A void smoke or fumes. If unavoidable, crawl low under smoke.

✓ **If there is a fire in your workplace**

- ❖ Activate the nearest fire alarm pull station and alert in the immediate area.

- ❖ Use extinguishers only if trained and comfortable in doing so. Remember:
  - ✓ Always maintain access to an exit
  - ✓ Do not let fire get between you and the exit
  - ✓ Avoid smoke or fumes.
- ❖ If safe to do so, close doors and windows to confine fire
- ❖ Evacuate and proceed to the designated assembly area.

✓ **Remember**

1. Do not use elevators
2. Follow directions from the building emergency team
3. Does not re- enter the building until it has been deemed safe to do so by a person of authority, /i.e., professional first responders, BET members, or security officer? /

1.2. Fire risk assessment procedure

Fire risk assessments are carried out by fire safety experts and professionals who have undergone training and education in fire safety. However, you can also do your share in assessing fire risks in your place by following the basic steps of a fire risk assessment procedure:

Step One: Identify fire hazards

Fire will only occur if these three factors are present: oxygen, fuel and a source of ignition. While we can hardly do anything about oxygen since it is already in the air that we breathe, what we can do is identify fire hazards that include the last two factors, the fuel and source of ignition. Probable sources of ignition include naked flames, heaters, cigarettes, matches, gas welding, cookers, hot-air dryers, engine boilers, machinery, halogen lamps, electrical equipment, heating devices.

As for fuel, anything that burns in fire including paper, textile, wood, card, plastics, rubber, foam, furniture, packaging, rubbish, waste, solvents, paints, varnish, adhesives, LPG, acetylene and other flammable products are considered fuel. Oxygen sources

such as air conditioning and commercial oxygen supplies may not be significant fire hazards but they can surely intensify a fire.

Step Two: Identify people at risk

Everyone living or working in a place can be considered people at risk. However, those who are at bigger risk include people who closely work with flammable products and fire hazards, people who work alone or isolated, elderly, pregnant women, disabled, and children. When identifying people at risk, you also need to consider the number of people in the area and if there are sufficient means of escape and clear **safety signs**. Escape routes should be accessible, easy to locate, have sufficient space, and are suitable even for the disabled and elderly.

Step Three: Evaluate, reduce and remove risks and hazards

After you have identified the hazards and the people at risk, the next step is to act on them. You need to undertake control measures to reduce risks to an acceptable degree. For one, you can take action to reduce the possibility of ignition. This means responsible and careful usage of probable sources of ignition such as electrical equipment, heating devices and those other mentioned above. It would even be better if you can switch to high quality equipment such as electrical appliances so that there will be less risk of fire.

It is also necessary to diminish fuel load in the premises. If possible, get rid of waste and rubbish accumulating in the storeroom or attic. Give away paper, plastic, and other rubbish that you will not be using anymore to a local recycling station. If it is not possible to eliminate all the paper in your storage area, the least you can do is to install a water fire extinguisher in this area so that in case of a fire outbreak, it can easily be tackled.

Further reduction of risks can be accomplished through an effective fire safety plan, improvement of means of escape, fire drills and safety trainings, increase of fire warning systems, and installation of high quality firefighting equipment. Smoking, if ever cannot be stopped altogether, should at least be done in a designated area where it is not dangerous to smoke. Never allow smoking in sleeping areas, enclosed rooms, or places

that have poor ventilation. Buying of the right fire safety equipment such as extinguishers and fire hose reels is also of prime importance. For example, with fire extinguishers, you always need to buy the right kind. A **car fire extinguisher** is for automobiles, a CO2 fire extinguisher is for electrical fire, a dry powder fire extinguisher is for overheated flammable gases, and so on.

Step Four: Record your findings

In your study, you will come up with findings that will be significant and helpful in your action plan. Recording these findings as well as the control measures you intend to undertake will serve as a practical guide for your fire safety plan.

Step Five: Review and revise risk assessment

A fire risk assessment is not a one-time thing. It is an ongoing process that should be monitored and audited regularly. Existing control measures should be reviewed constantly so that they can be maintained or improved whenever necessary.

Significant changes in your home or office may increase or decrease fire hazards. Some of the possible changes that may affect fire risk assessment include new work processes that introduce additional fuels or ignition sources, change in home or office layout that may affect the escape route plan, increase of number of people, and many others.

Fire risk assessment is not only important, it is necessary to keep your homes and workplaces safe from fire hazards.

Self-Check – 1	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts for each

1. Explain fire risk assessment procedure
2. List steps of fire risk assessment

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information Sheet 2- Using appropriate fire extinguishers and fire fighting equipment

2.1. Fire extinguishers

Each fire extinguisher has its own symbolic notation that is a special geometric symbol to make it easier for you to identify the extinguisher type. They also have some additional information necessary in case of this or that class of fire fighting.

- ✓ **Class A fire extinguishers**, for example, have the green triangle on them and also the special numerical rating, showing the amount of water this extinguisher holds and the amount of fire it is able to extinguish.
- ✓ **Class B fire extinguishers** are marked with the red square and have the numerical rating indicating the approximate area of fire (in square feet) it is able to extinguish.
- ✓ **Class C fire extinguishers** are marked with the blue circle, but they don't have any numerical rating. As a rule they contain the non-conductive extinguishing agent, because they are often used for electrical fire fighting.
- ✓ **Class D fire extinguishers** have the yellow decagon on them and are mostly regarded as the part of chemical laboratory firefighting equipment. They also don't have any numerical rating on them. There are also class K fire extinguishers, marked with the black hexagon. They are intended for the fighting the fire, caused by any cooking oils, fats or trans-fats combustion and are highly recommended for restaurant or cafeteria kitchens.

Types of Fire Extinguishers:

- ✓ Water or APW (air-pressurized water) Fire Extinguishers: These are suitable for Class A fires only. Never use a water extinguisher on B and C types of fires as these can be very dangerous.
- ✓ Dry Chemical Fire Extinguishers: They are filled with sodium bicarbonate or potassium bicarbonate. However, there is left a corrosive residue, which must be

cleaned immediately to prevent any damage to materials. These are good for BC fires.

- ✓ Carbon Dioxide (CO2) Fire Extinguishers: These are filled with highly pressurized CO2, which is a non-flammable gas. These can be used on BC fires, but usually ineffective on class A fire.
- ✓ Foam Fire Extinguishers: These are good for AB fires, particularly where petrol, paraffin, oil, varnishes, spirits, flammable liquids are involved. However, these are not recommended for fires involving electricity.
- ✓ Dry Powder Fire Extinguishers: These can be used on classes AB fires. However, when used indoors, powder can obscure vision or damage goods and machinery.
- ✓ Clean Agent Fire Extinguishers – Clean agent is discharged as a rapidly evaporating liquid and leaves no residue. It effectively extinguishes Class A, B and electrical fires by cooling and smothering, without conducting electricity back to the operator. The clean agent is pressurized with nitrogen gas.

Fire extinguishers are also categorized into hand held, portable, wall mounted, trolley mounted and automatic systems. Automatic / Modular Type fire extinguishers get operated automatically on pre-set temperature basis. When heat from an uncontrolled fire increases to a pre-set temperature of the unit, the fusible link releases, discharging the extinguishing agent. Since 80% of the most damaging fires occur during night times, weekends or holidays when no one is around, we strongly feel that automatic operation is the only solution for round–the- clock protection against fire.

2.1.1. Fire-Fighting Equipment

Firefighting was not an easy task a century ago but today we have multiple tools or equipment to defeat even the worst environments that can cause big disasters. These firefighting equipment not only save us from disasters but they are helpful for the firefighters struggling against different worst situations. Different Types of Firefighting Equipment are designed according to universal fire security situations that may secure the properties, lives and firefighters even seconds from disasters. This equipment are consisted of alarms, blankets, extinguishers, hoses, hydrants, suits and detectors according to different fire situations varied from place to place and time to time.

Whereas, some common types of firefighting equipment and their uses are as follows:

✓ **Fire Alarm**

Fire Alarms and Fire Sensing Alarms are two different fire warning products but their aim is same to warn the managements about fire that can cause big problems. In starts, fire alarms were not sensible and so people manually pressed them to ensure others that there is a fire but today multiple sensing features make it easy to secure those places that have threats to security like terrorist attacks. Fire sensing alarms produce high energy sound when they sense smoke, heat or light around them.

✓ **Fire Blanket**

Fire Blankets is designed to save lives when there is fire so they are the key equipment for firefighters that should be with them when they are operating any building with the presence of alive bodies. Fire blanket is weaved of wool and erects the fire away so the seared person in the blanket feels safer because water can cause worst to his skin.

✓ **Fire Extinguisher**

In ancients, glass grenades were thrown towards unpredicted fire that contained chemicals to remove the fire but today different standards are used to defeat the fire combustion caused by any cause. Fire extinguishers or flame extinguishers are typically designed to reduce or remove fire from any location with the help of material used in it like chemical, gas, foam and sometimes powder. Different types of fire extinguishers are CO2 extinguishers, foam flame extinguishers and dry powder extinguishers.

✓ **Fire Hose**

Fire hoses are used to extinguish the fire from buildings and houses with the help of long nozzle installed in front of hose that makes pressure. Fire hoses usually installed with firefighting tank that are used to pass the fluids like gas, foam or liquid from tank and it can be flattened and folded over the reel for compaction when not needed. These fire hoses are made of synthetic fiber or nylon whereas types of fire hoses are supply, relay, forestry, booster and suction hose.

✓ **Fire Hydrant**

Fire hydrants are installed with roadsides usually on footpaths and they are highly pressured pumps flow water when needed. Fire hydrants can be seen indoors or outdoors painted in red and also known as Johnny Pump because firefighters of 19th century were called Johnnies. They are the vertical-domed tank contain valve on top and plugs on all sides to flow the water or foam with high pressure.

✓ **Fire Suit**

Fire Suits are designed to secure the fire fighters when they are fighting against fire sometimes under the buildings with worst situations. Fire suits are designed with the clothing that repels the fire, heat and light away made with protectant cloth like fireproof synthetic fiber and the other names of firefighting suits are fire proximity suits or silver bunker suits.

✓ **Heat Detector**

Heat detectors are basically alarm devices that react when sense the heat caused by fire or any unpredicted source. Heat detectors contain sensors that are highly sensible to any kind of heat that is not programmed in their database. Heat detector securely alarms when it sense the heat or any misshapen under the area where it installed.

✓ **Smoke Detector**

Smoke detector is also fire security alarm that can sense the smoke caused by any fire under the area where smoke detector installed and in working position. Basically, smoke detectors are installed across the public areas where security cameras can't be installed like public washrooms where people usually smoke cigarettes that can cause big disasters.

✓ **Axes**

Axes allow firefighters to access buildings or other structures by hacking through walls, glass or other material. Axes also allow firefighters to locate hollow points and support

beams. For example, if they hit an area that sounds like a thud, this is more than likely a support beam. The firefighter's ax is very distinctive in look with the back of the head making a point. It almost resembles a pickax, and these axes are usually a very bright color such as red. This allows firefighters to quickly find them even in the smokiest environments

Self-Check – 2	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 pn'ts

1. List and explain types of fire extinguishers

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information sheet 3. Following evacuation procedures

3.1. Evacuation procedures

The following are evacuation procedures

- ✓ If the fire alarm sounds, immediately evacuate the building by the nearest exit. Do not use elevators
- ✓ **Collect the necessary items**. If it is safe to do so, gather your personal items quickly. You may not be allowed to re-enter your building for some time.
- ✓ **Leave by nearest exit.** Evacuate the building immediately by the nearest safe exit or as advised by the building emergency team members /BET/
- ✓ **Walk.** When evacuating the building, employees should WALK not run, grasp handrails, remain QUIET and CALM and follow emergency instructions. Note; if you meet firefighters coming up, stay next to the outside wall of the stairs in single file
- ✓ **Emergency aid.** if requested, assist BET members in the performance of their duties
- ✓ **Assembly areas.** P**roceed to the designated assembly area and check in with the BET members in charge.**
- ✓ **Remain at site. Please REMAIN** at the assembly area until released by person of authority / professional responder, BET members, or security officer/

Self-Check – 3	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 pn’ts

1. List and discus evacuation procedures

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information sheet 4. Carrying out specific safety procedures and use of industrial gases

4.1. Occupational health and safety procedures

Occupational health and safety is a discipline with a broad scope involving many specialized fields. In its broadest sense, it should aim at:

- ✓ the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations;
- ✓ the prevention among workers of adverse effects on health caused by their working conditions;
- ✓ the protection of workers in their employment from risks resulting from factors adverse to health;
- ✓ the placing and maintenance of workers in an occupational environment adapted to physical and mental needs;
- ✓ the adaptation of work to humans.

Poor working conditions affect worker health and safety

- ✓ Poor working conditions of any type have the potential to affect a worker's health and safety.
- ✓ Unhealthy or unsafe working conditions are not limited to factories — they can be found anywhere, whether the workplace is indoors or outdoors. For many workers, such as agricultural workers or miners, the workplace is “outdoors” and can pose many health and safety hazards.
- ✓ Poor working conditions can also affect the environment workers live in, since the working and living environments are the same for many workers. This means that occupational hazards can have harmful effects on workers, their families, and other people in the community, as well as on the physical environment around the workplace.

4.1.2. Work place safety

Workplace safety is about preventing injury and illness to employees and volunteers in the workplace. Therefore, it's about protecting the nonprofit's most valuable asset: its workers. By protecting the employees' and volunteers' well-being, the nonprofit reduces the amount of money paid out in health insurance benefits, workers' compensation benefits and the cost of wages for temporary help. Also factor in saving the cost of lost-work hours (days away from work or restricted hours or job transfer), time spent in orienting temporary help, and the programs and services that may suffer due to fewer service providers, stress on those providers who are picking up the absent workers' share or, worse case, having to suspend or shut down a program due to lack or providers.

4.1.3. Workplace safety program

Any policy, procedure or training used by the organization to further the safety of paid and volunteer staff while working for the nonprofit is considered part of a workplace safety program. Workplace safety programs to reduce work-related injury and illness are concerned with:

- promoting and rewarding safe practices at work
- reducing injuries and illnesses at work
- eliminating fatalities at work

4.1.4. Workplace injury and illness prevention

According to OSHA, work-related injury and illness prevention falls into three categories in order of priority: engineering controls, administrative controls, and personal protective equipment controls. We have adapted this list to make it more applicable to most nonprofit organizations:

- ✓ administrative controls
- ✓ written procedures and safe work practices,
- ✓ exposure time limitations (temperature and ergonomic hazards),
- ✓ monitor use of hazardous materials,
- ✓ alarms, signs and warnings,

- ✓ buddy system, and
- ✓ Training.

Workplace safety initiatives can be as simple as closing and locking the front door; replacing burned out lights inside and out; closing drawers before walking away from the desk or file cabinet; knowing and using proper lifting techniques; providing adjustable workstations to accommodate differences in people's stature and weight to eliminate repetitive motion, back, neck and shoulder injury; and using the proper tool for the job in an appropriate fashion. These and other basics should be universally adopted safety procedures in any workplace.

4.2. Elements of a Workplace-safety Manual

Element 1 — Management Leadership and Employee Involvement

- ✓ Statements on the value of workplace safety and why management is committed to it
- ✓ A list of the locations where written safety and health policies are posted for all employees and volunteers to see
- ✓ A schedule of when and where regular meetings are held that address employee safety and health issues
- ✓ A stipulation that abiding by all safety and health rules is a condition of employment

Element 2 — Workplace Analysis

- ✓ An analysis of workplace conditions to identify and eliminate existing and potential hazards
- ✓ An outline of the procedure for reporting hazards
- ✓ What employees and volunteers should expect to see in terms of investigation and relief
- ✓ Assignments for trained personnel to conduct inspections of the work site and correct hazards

- ✓ Policy that any changes in process or new high-hazard facilities are reviewed by a competent person, and that the nonprofit seeks assistance, if necessary, from safety and health experts.
- ✓ A schedule for future analyses (on a quarterly basis or last week of the month)
- ✓ An outline of hazards within the nonprofit's mission
- ✓ A brief glossary of relevant safety terms
- ✓ Appropriate Forms

Element 3 — Hazard Prevention and Control

- ✓ Process for training employees in proper procedures for handling specific situations
- ✓ Procedure for ensuring that employees know how to use and maintain personal protective equipment and gear
- ✓ Clear simple steps for hazard-correction procedures.
- ✓ Process for checking that hazard correction procedures are being carried out
- ✓ Process for reviewing any occurrences for underlying causes and considering how additional corrective actions might reduce the potential for future incidents
- ✓ List of ways the emergency response system can be activated
- ✓ Accident investigation procedures: how to analyze data as it relates to:
    - ❖ New process or equipment
    - ❖ Apparent accident/injury trends
    - ❖ Cumulative trauma disorders
    - ❖ High absenteeism and turnover
    - ❖ Employee complaints
    - ❖ Employees with reduced or limited capabilities

Element 4 — Safety and Health Education

- ✓ Policy to allow only properly authorized and trained employees to do any job
- ✓ Process to make sure that no employees do any job in an unsafe manner, or do a job that is inherently unsafe

- ✓ Provision to hold emergency-preparedness drills using a range of scenarios for employees on a regular basis over the year
- ✓ Method to ensure that particular attention is paid to employees learning new operations to make sure they have the proper job skills and awareness of the hazards related to a particular job
- ✓ Method for training supervisors and managers to recognize hazards and understand their responsibilities
- ✓ Accountability to ensure that supervisors and managers take their roles in workplace safety seriously

- **Basic general industry safety rules:**

✓ Your safety is your personal responsibility.

✓ Always follow the correct procedures.

✓ Never take shortcuts.

✓ Take responsibility and clean up if you made a mess.

✓ Clean and organize your workspace.

✓ Ensure a clear and easy route to emergency exits and equipment.

✓ Be alert and awake on the job.

Self-Check – 4	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 (pn'ts) each

1. List the effects of poor working condition
2. Explain the use of work place safety

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

5.1. Minimizing drought hazards

The term drought is widely used but no unique definition exists across disciplines. A consequence is the difficulty to understand drought characteristics across time and space. In general terms, defined drought as “a period of abnormally dry weather long enough to cause a serious hydrological imbalance”. It results from a shortfall of precipitation over a certain period of time and/or from a negative water balance due to an 6 increased atmospheric water demand following high temperatures or strong winds. This situation may be exacerbated by antecedent conditions in soil moisture, reservoirs and aquifers, for example, and typically lasts from months to a few years. Extreme “Megadroughts” can persist for decades, while so-called “Flash Droughts” are short periods (< 3 months) of high temperatures, resulting in a fast depletion of soil moisture that can lead to major impacts.

A lack of water in stores such as rivers, lakes, reservoirs and aquifers (water stored underground naturally) can lead to drought. Areas that rely on rainfall and surface water are more likely to experience drought. Surface water quickly evaporates in warm, dry conditions leading to an increased risk of drought. Drought and desertification are closely related phenomena. Inappropriate land use, such as monocultures, and unsustainable land management practices, such as deforestation, unsuitable agricultural practices and overexploitation of water resources), can cause land degradation that can be further aggravated by drought.

5.1.1. Drought types

Depending on the effect in the hydrological cycle and the impacts on society and environment, different drought types are commonly distinguished:

(1) Meteorological drought is a period of months to years with a deficit in precipitation or climatologically water balance (i.e. precipitation minus potential evapotranspiration) over a given region. The deficit is defined with respect to the long-term climatology. A meteorological drought is often accompanied by above-normal temperatures and

precedes and causes other types of droughts. Meteorological drought is caused by persistent anomalies in large-scale atmospheric circulation patterns, which are often triggered by anomalous tropical sea surface temperatures (SSTs) or other remote conditions. Local feedbacks such as reduced evaporation and humidity associated with dry soils and high temperatures often enhance the atmospheric anomalies.

(2) Soil Moisture (agricultural) drought is a period with reduced soil moisture that results from below-average precipitation, less frequent rain events, or above-normal evaporation.

(3) Hydrological drought occurs when river stream flow and water storages in aquifers, lakes, or reservoirs fall below long-term mean levels. Hydrological drought develops more slowly because it involves stored water that is depleted but not replenished. Time-series of these variables are used to analyse the occurrence, duration and severity of hydrological droughts.

- **Causes of drought:**
    - ✓ Land and water temperatures cause drought.
    - ✓ Air circulation and weather patterns also cause drought.
    - ✓ Soil moisture levels also contribute to drought.
    - ✓ Drought can also be a supply and demand of water issue

5.1.2. Implementing measures

Drought is one of the major threats among natural hazards to people's livelihoods and socio-economic development. Drought tends to occur less frequently than other hazards. The most common index used to define and monitor drought is the Palmer Drought Severity Index (PDSI), which attempts to measure the duration and intensity of long-term, spatially extensive drought, based on precipitation, temperature, and available water content data.

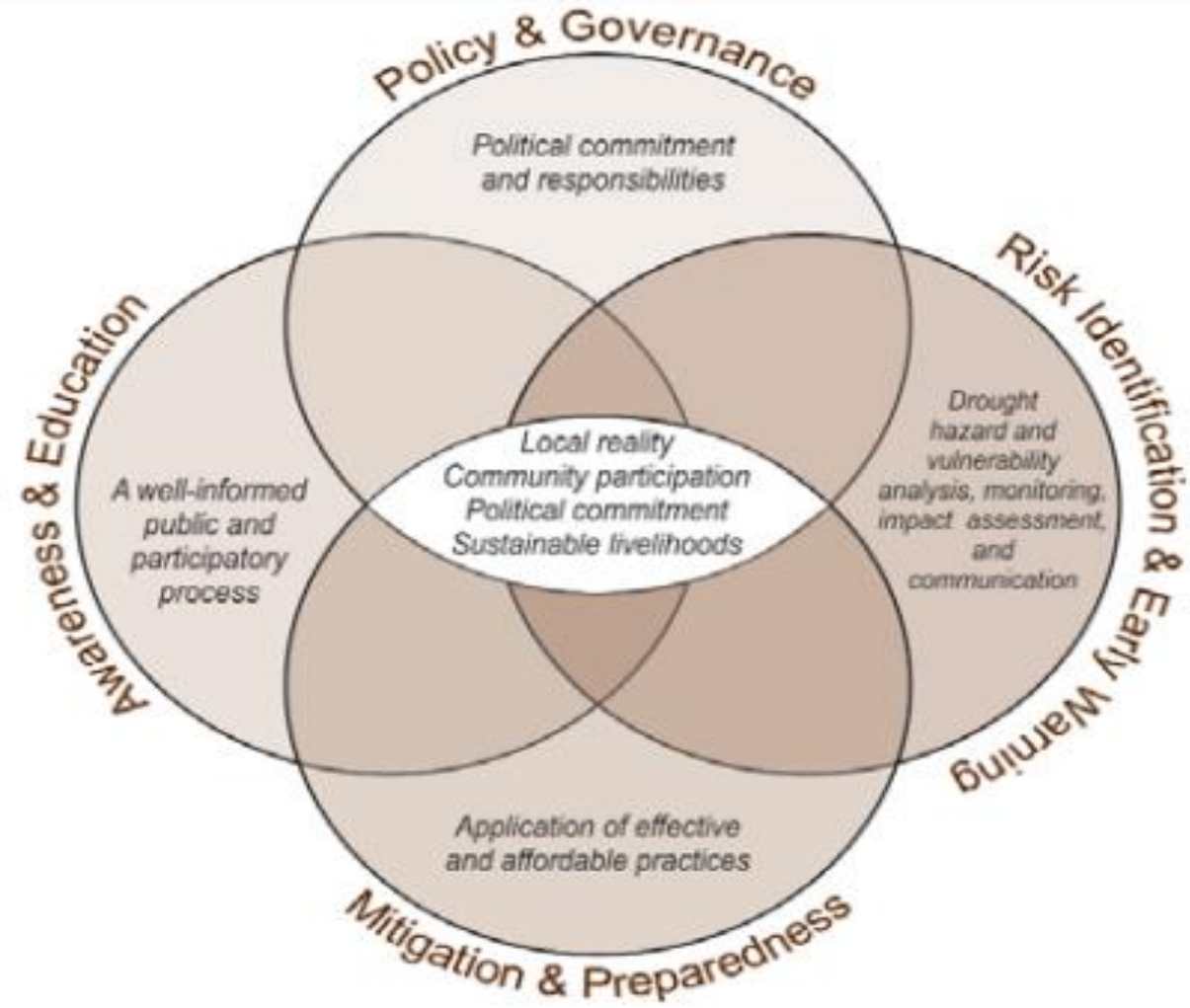

Figure 5.1. Drought Risk Reduction Framework

Self-Check – 5	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 (pn'ts) each

1. What is drought
2. List drought types

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information sheet- 6 Identifying pests and diseases

6.1. Introduction

A pest is an organism with characteristics that people see as damaging or unwanted, as it harms agriculture through feeding on crops or parasitizing livestock. The term pest is used to refer specifically to harmful animals but it also relates to all other harmful organisms, including fungi and viruses. A pest is any animal or plant which has a harmful effect on humans, their food or their living conditions. Pests include small animals or insect, weed and disease which: damage stored food.

Pest, disease and contaminants within plant export commodities are extensive and diverse and may be specific or general depending on the pest species and associated commodity. This volume seeks to increase knowledge of pests, diseases and contaminants likely to be encountered by an authorized officer, however where uncertainty exists regarding an identification, the authorized officer must inform the exporter of their responsibility to seek professional identification.

Types of pests include:

- ✓ Insects, such as roaches, termites, mosquitoes, aphids, beetles, fleas, and caterpillars.
- ✓ insect-like organisms, such as mites, ticks, and spiders,
- ✓ microbial organisms, such as bacteria, fungi, nematodes, viruses, and mycoplasmas,
- ✓ weeds, which are any plants growing where they arc not wanted,

6.1.1. Pests and diseases on fresh fruit and vegetable

Mango seed weevil is a pest only associated with mangoes. The seed is the host for the weevil until it is ready to exit the fruit. Countries that list mango seed weevil as a regulated pest require the fruit to be cut at inspection to identify whether mango seed

weevil is present in the seed. Authorized officers will observe the fruit being cut and then when it is safe to do so, inspect the seed for mango seed weevil.

Figure 6.1. Mango Seed Weevil

Fruit fly is a serious agricultural pest and importing countries strict rules for the import of fruit fly host material. The fruit fly lay their eggs in the plant material or just under the skin of fruit and vegetables. Characteristic sting marks can be observed where the eggs have been laid. Cutting the fruit or vegetable to investigate whether eggs or larvae is inside is a common method for identifying if the product has been infested.

Figure 6.2. Fruit Fly

Citrus canker is a serious bacterial disease of citrus trees including grapefruit, lemons, limes and oranges. It reduces the growth of new fruit and spoils healthy fruit. Outbreaks of this disease have been eradicated from Queensland and the Northern Territory at great cost to industry and growers

Figure 4.3. Citrus Canker

The disease attacks the leaves, twigs and fruit of citrus trees. It causes the leaves to drop and fruit to fall to the ground before it ripens. People may also contribute to disease spread by moving infected plants or plant parts. Potato Cyst Nematode Potato cyst nematodes are roundworms that live on the roots of plants. They reduce yield and ultimately damage the plant. Authorized officers do not have the equipment to identify nematodes and will require a certificate that will meet the importing country requirements.

6.1.2. Pests and Disease Symptoms found on Nursery Stock

The following images are examples of the various pests that may be found on nursery stock plants. Aphids are one of the most destructive insect pests on plants. They are soft bodied insects and their colours range from light green to pink. Aphids can be found on number of different nursery stock plants. Ants can also be found where there are aphids due to their symbiotic relationship.

Figure 6.4 Aphides

Mealy bugs are an insect that are considered a pest as they feed on plant juices from a variety of different plant species. They are also a known vector of several different diseases affecting plants. Mealy bugs appearance is distinctive with a white powdery view from above and a pink coloration viewed from beneath.

Figure 6.5 Mealy bugs

Powdery Mildew is a fungal disease that affects a wide variety of plants. The symptoms can be observed on the leaves and the stems of the plants. It can visually be seen as a white powdery spots displaying the affected areas.

Figure 6.6. Powdery Mildew

Rust is a fungal disease that affects a variety of different plants. Symptoms vary from lesions on the leaves, buckling of the leaves and the formation of bright yellow pustules (myrtle rust). In some cases the movement of plants interstate and to be exported has had restrictions put in place. An example of this is with plants from the Myrtaceae family being affected from Myrtle rust.

Figure 6.7 Rust

Common Pests and Diseases on other plant and plant products

Springtails are common agricultural pests found around the world. They are known to play a positive role in some agricultural sectors by controlling plant fungal diseases. At the inspection bench, springtails will more than likely be found on leafy vegetables such as cabbages, lettuce and celery.

Figure 6.8 Springtails

Ants Ants are commonly found on advanced nursery stock and in pots that still contain soil and other media. The authorized officer will need to thoroughly inspect the plant and any packaging. Ants could also be located in the container which the plants will be transported in.

Figure 6.9. Ants

Sooty mould is a fungi from the excretion of sap sucking insects such as aphids and mealy bugs. The fungi mainly blocks sunlight to the plant though is a good indicator that there are other insects affecting the plants health.

Figure 6.10 Sooty Mould

Self-Check – 6	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 (pn'ts) each

1. define pest
2. Explain the use of identifying pest and disease

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

Information sheet 7. Identifying and controlling the most dangerous plant pests

7.1. Pest control methods are used.

Pest control tactics include: host resistance, biological control, cultural control, mechanical control, sanitation, and chemical (pesticide) control.

- ✓ Physical methods of pest control.
- ✓ Chemical methods of pest control
- ✓ Cultural methods of pest control.
- ✓ Biological methods of pest control.

7.1.1. Integrated Pest Management

An Integrated Pest Management (IPM) program integrates control tactics including cultural practices, variety selection, biological control and insecticides to manage insect pest populations so that economic damage and harmful environmental side effects are minimized. Insecticides should only be used on an as-needed basis; therefore, insect scouting must be conducted regularly throughout the season to determine if an insecticide application is warranted.

Scouting/Monitoring

Insect populations vary from year to year and field to field during the growing season. All fields should be monitored for both insect pests and beneficial populations at least weekly during the season, preferably twice weekly after blooming has begun. In areas of high insect pressure or increasing populations, twice-a-week scouting is recommended. Monitoring plant growth and development is an important aspect of crop management, maximizing yield potential and managing insects.

Two basic components of decision making in IPM are

- ✓ The economic injury level (EIL) and
- ✓ The economic threshold (ET).

The EIL is defined as the lowest pest population density that will cause economic damage. The EIL is a pre-determined number that will justify the cost of treatment. The ET is defined as the pest population level at which control should be initiated to keep the pest population from reaching economically damaging numbers. Economic thresholds have been established for specific insect pests. Multiple pest thresholds are not well established. Therefore, it is important to monitor the plant for fruit loss and retention levels to evaluate treatment thresholds, involving either single or multiple pests.

When losses from multiple pests are occurring, fixed individual pest thresholds may become dynamic or change. Decisions to apply controls should be based on thorough scouting and identification of pests, cost of insecticide, the price of cotton, yield potential and fruit retention goals. The economic value of each fruiting form changes on each fruiting branch (node); therefore, it is important to know how this value is distributed on the plant. The value and placement of fruit being protected should be considered when making treatment decisions. Monitor fruit retention levels weekly, along with insects. Scheduled insecticide sprays should be avoided. Unnecessary applications of insecticide are not cost effective.

Applications of insecticides on an as needed basis will preserve beneficial insects, reducing the likelihood of secondary pest outbreaks. Certain production practices can have a significant impact on insect pest infestations. Some practices may increase the risk of insect attack and should be avoided, while others may have some level of control value. A production practice that has a negative impact on insect pests is desirable and is termed a cultural control.

Some common cultural control practices include:

- ✓ Pre-plant Vegetation

Management Destruction of weeds and/or cover crops by tillage or herbicide three or more weeks prior to planting will reduce the risk of cutworm infestations and some other pests.

- ✓ Field Border Maintenance

Plant bugs often build up on flowering plants surrounding cotton fields and move into fields when these preferred hosts dry up or are destroyed. Timely mowing of such vegetation can aid in reducing available hosts for plant bugs.

- ✓ Managing for Earliness

Early crop maturity decreases the period of crop susceptibility to yield loss by insects, reduces insect control costs and lowers selection pressure for resistance development to insecticides.

Self-Check – 7	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 (pn'ts) each

1. List the methods of pest control
2. Explain Integrated pest managements

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Information sheet 8. Considering unexpected floods resulting from abnormally heavy rainfall

8.1. Flooding

Heavy rainfall - if there is heavy rainfall there is less chance of it being soaked up by the soil (infiltration) so it runs off into the river. The faster the water reaches the river, the more likely it will flood. This will increase the flood risk, as the water will not be intercepted and flow into the river. Flooding is arguably the weather-related hazard that is most widespread around the globe. It can occur virtually anywhere. A flood is defined as water overflowing onto land that usually is dry. Flooding is often thought of as a result of heavy rainfall, but floods can arise in a number of ways that are not directly related to ongoing weather events.

Thus, a complete description of flooding must include processes that may have little or nothing to do with meteorological events. Nevertheless, it is clear that in some ultimate sense, the water that is involved in flooding has fallen as precipitation at some time, perhaps long ago. The origins of flooding, therefore, ultimately lie in atmospheric processes creating precipitation, no matter what specific event causes the flooding.

Floods produce damage through the immense power of moving water and through the deposition of dirt and debris when floodwaters finally recede. People who have not experienced a flood may have little or no appreciation for the dangers of moving water. The energy of that moving water goes up as the square of its speed; when the speed doubles, the energy associated with it increases by a factor of four. Flooding is typically coupled to water moving faster than normal, in part because of the weight of an increased amount of water upstream, leading to an increase in the pressure gradient that drives the flow. In most cases, the damage potential of the flood is magnified by the debris that the waters carry: trees, vehicles, boulders, buildings, cultivated crop and stored crop yield. etc

Figure 8.1 impacts of flooding on socio economic

- **Common Causes of Flooding**

✓ Heavy Rains. The simplest explanation for **flooding** is heavy rains.

✓ Overflowing Rivers.

✓ Broken Dams.

✓ Urban Drainage Basins.

✓ Storm Surges and Tsunamis.

✓ Channels with Steep Sides.

✓ A Lack of Vegetation.

✓ Melting Snow and Ice.

- **Impacts of flooding on agricultural crop production**

Erosion and soil displacement from flooding can ruin fields and destroy crops. Erosion washes the fertile top soil away which leaves crop plants with nowhere to set roots. Sand, gravel, and rocks deposited by flood waters can smother and destroy exposed crops. Although weather and climate are the main drivers of flooding, changes in land cover can also influence the occurrence and frequency of floods by changing the responsiveness of river flows to rainfall.

- **Controlling floods**.

Some methods of flood control have been practiced since ancient times. These methods include planting vegetation to retain extra water, terracing hillsides to slow flow downhill, and the construction of floodways (man-made channels to divert floodwater.

The following structural measures are generally adopted for flood protection:

- ✓ Embankments, flood walls, sea walls.
- ✓ Dams and reservoirs.
- ✓ Natural detention basins.
- ✓ Channel improvement.
- ✓ Drainage improvement.
- ✓ Diversion of flood waters.

Self-Check – 8	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 (pn'ts) each

1. Define flooding
2. Explain the couse of flooding and its impacts

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers

Information sheet -9 Understanding hurricanes, tornadoes, tropical storms and cyclones

9.1. Atmospheric whirls of different scales and origin

Everybody interested in weather or weather forecasts will have heard the words in the title of this article. Basically, all four of them refer to atmospheric whirlwinds of different scales, with minimum atmospheric pressure at the center and higher pressure on the periphery. Consequently, the rotating air movement around the low pressure core is the main characteristic feature of the quartet. The circulation around the axis of a whirl is also combined with the air flow along the axis of either a huge cyclone or a small-size tornado. In cyclones, hurricanes and typhoons the axis is located quasi- vertically, and the air moves upward.

Tropical cyclones are among the most destructive natural phenomena. The impact from cyclones extends over a wide area, with strong winds and heavy rains. However, the greatest damage to life and property is not from the wind, but from secondary events such as:

- ✓ Storm surges,
- ✓ Flooding,
- ✓ Landslides and
- ✓ Tornadoes.

Well, they are all basically the same thing, but are given different names depending on where they appear.

Hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific.

Figure 9.1 hurricanes

Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean. A cyclone is a large, destructive storm that is comprised of strong winds rotating around a center of low pressure. The biggest differences between hurricanes and tornadoes are how big they are and how long they last. Hurricanes are typically hundreds of miles in diameter, with high winds and heavy rains over the entire region. Hurricanes can last for days or even weeks. Tornadoes usually last no more than a few minutes.

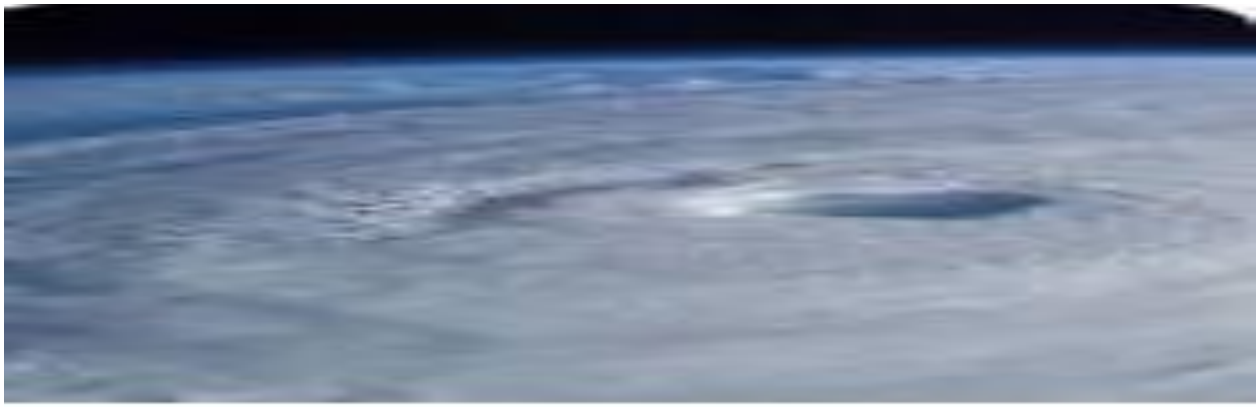

Figure 9.cyclones

A tornado is a violent storm comprised of extremely strong winds spiralling around a central point in a funnel-shaped cloud. While both types of storms are capable of producing destructive winds, tornadoes can become stronger than hurricanes. The most intense winds in a tornado can exceed 300 miles per hour, while the strongest known Atlantic hurricane contained winds of 190 miles per hour.

Figure 9.3 tornado

Self-Check – 9	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 (pn'ts) each

1. Define :Hurricanes, cyclones and tornado

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers

LG #53	LO #3- Evaluate the crop production emergency

Instruction sheet

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

- Preparing emergency and potential emergency situation reports
- Acquiring advice from relevant people in evaluating the emergency.
- Assessing the possible development of the emergency situation and evaluating further potential hazards.
- Prioritizing needs promptly and accurately.

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

- Prepare emergency and potential emergency situation reports
- Acquire advice from relevant people in evaluating the emergency.
- Assess the possible development of the emergency situation and evaluating further potential hazards.
- Prioritize needs promptly and accurately.

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” which are placed following all 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).

Information Sheet 1- Preparing emergency and potential emergency situation reports

1.1. Emergency reports and signals

Some of the emergency signals and ways of reporting are;

- ✓ observation
- ✓ verbal
- ✓ emergency warning system
- ✓ emergency alarm system
- ✓ hand signals
- ✓ verbal reports
- ✓ telephone communications
- ✓ radio communications
- ✓ whistles

1.1.1. Identifying Potential Emergency Situations

The first requirement of this element of the Standard is to identify all conceivable incidents, accidents, and emergencies under normal operating conditions, and during situations such as start-up, shut-down, other circumstances when operations are not at equilibrium, and events outside the organization's control. Various strategies can be used to arrive at a catalogue of potential emergency situations.

It including:

- ✓ Review incident records for the past five years
- ✓ Check statistics on the types of incidents and emergencies that have occurred, their locations, times of the day, shifts, operating and weather conditions, and other critical factors
- ✓ Review the environmental aspects list for potential emergencies under abnormal operating conditions
- ✓ With a group of individuals from various functional areas in the organization, brainstorm possible incidents and emergencies. For more information refer LO 2.

Self-Check – 1	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer five point for each

1. List the emergency signals and ways of reporting
2. Explain the Identifying Potential Emergency Situations

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points
You can ask you teacher for the copy of the correct answers.

Information Sheet 2- Acquiring advice from relevant people in evaluating the emergency

2.1 Educations in emergency situations

An emergency arises as a result of natural disasters or human-made crises like war and civil strife, different infectious and non infectious diseases .The term "complex emergencies" has become widespread. It denotes an emergency produced by armed conflicts and political instability and not by natural disasters .An educational emergency means that a disaster or conflict whether due to war or natural disasters, "have destabilized, disorganized or destroyed the education system, and which require an integrated process of crisis and post-crisis-response.

We tend to think that first of all animals urgent needs must be met in an emergency. Education is luxury in such situations and comes last. However, education has gradually become what is called the "fourth pillar" in humanitarian assistance seen as equally important as food, shelter and health. "Education provides opportunities for students, their families and communities to begin the trauma healing process, and to learn the skills and values needed for a more peaceful future and better governance at local and national levels for emerging and re-emerging emergency.

There are three different emergency situations: **acute emergencies**, **chronic emergencies** and **return/rehabilitation**. An **acute emergency** is defined as "any situation in which the life or well-being of animals will be threatened unless immediate and appropriate action is taken, and which demands an extraordinary response and exceptional measures".

A chronic emergency is *" A general situation where*

- ✓ An acute emergency has become a coping or maintenance phase in exile or within camps.
- ✓ Risk population have in part been absorbed by the local population, but there is no solution to the basic problem
- ✓ Recent or dormant out breaks may erupt again, and where strategic support may ease tensions and encourage peaceful development and reconciliation".

In most cases evaluations are imposed by politicians or donor agencies. They need proof that it is or has been worthwhile spending money on the project and advice as to its continuation.

Some questions

1. How should you plan for risk operations?
2. What medical assistance should you provide during an emergency?
3. What role should employees play in your emergency action plan?
4. What employee information should your plan include?
5. What type of training do your employees need?
6. How often do you need to train your employees? .
7. What does your plan need to include about hazardous substances?
8. What special equipment should you provide for emergencies?
9. How do you choose appropriate respirators and other equipment

Self-Check – 2	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. Educations in emergency situations (10 pts)

You can ask you teacher for the copy of the correct answers.

Note: Satisfactory rating - 10 points Unsatisfactory - below 10 points

Information sheet 3– Assessing the possible development of the emergency situation and evaluating further potential hazards.

3.1. Assessing the emergency

Procedures for Assessing Emergency Risk

1. Identify and determine the information needs of stakeholders, including decision makers, program staff, the media, and intended audiences.

The first step in planning an evaluation is to identify individuals and groups who have a vested in your Emergency Risk Communication activities. This requires soliciting the information needs of key stakeholders.

2. Develop a program logic model that illustrates how the activities designed to achieve intended effects with target audiences.

Develop a logic model that diagrammatically illustrates and describes the sequence of events for bringing about change by synthesizing the main program elements into a picture of how the program is supposed to work. One of the virtues of a logic model is its ability to summarize how your communication activities will reach and influence each intended audience. A logic model can also display the infrastructure needed to support Emergency Risk Communication activities.

Step 3. Formulate measurable performance objectives for each aspect of the activities you want evaluated.

Write communication activity objectives (standards) for each type of evaluation that will examine discrepancies between what is expected (e.g., the standard of implementation or effects) and what is observed in the evaluation process. That is, depending on the type(s) of evaluation you plan to carry out, you should write activity standards/objectives that explicitly state and quantify stakeholder expectations concerning the communication activities. For example, if stakeholders are interested in knowing about the appeal, comprehension, clarity, consistency, main points, correct tone, credibility, audience relevance, and truthfulness of the messages, you should write objectives or standards that relate to each of these factors

Step 4. Write evaluation questions that, when answered, generate the information needed to: 1) determine the validity of your logic model, 2) provide information required to determine whether performance objectives are achieved, and 3) answer stakeholder questions.

Write all the evaluation questions that need to be answered to generate the information that will be needed to:

1) Determine the validity of your logic model assumptions related to how the program components work together or separately to bring about intended effects,

2) Provide information required to determine whether performance objectives related to such things as the development, costs, execution, reach, and effects of messages and activities are achieved, and 3) answer stakeholder questions about such things as the development, delivery, reach, costs, and/or effects of the program. These questions will be used in both developing and guiding the development of the items included on the data gathering methods described in step 5.

Step 5. Determine the appropriate source(s) of information and the data gathering methods that will be used to collect data on stakeholder questions and communication activity standards.

Once evaluation questions have been decided on, you will need to decide on the source(s) of data and data gathering methods to be used to gather information. Data collection methods are numerous, but are usually classified as either qualitative or quantitative. Qualitative methods typically produce descriptive information, while quantitative methods generate numerical data such as frequencies, percentages, or rates.

Step 6. Formulate an evaluation design that describes how methods will be applied in collecting credible data from the various sources of information you decided on in the previous step.

Develop an evaluation design that articulates who will do what, where, when, and how often in the process of collecting and ensuring the security of data gathered to answer stakeholder questions and to measure alignment with activity standards. An excerpt from CDC's Framework for Program Evaluation in Public Health defines evaluation design:

Design refers to how the evaluation's questions, methods, and overall processes are constructed… [T]he design should be organized from the start to achieve intended uses by primary users. Having a clear design that is focused on use helps persons who will conduct the

evaluation to know precisely who will do what with the findings and who will benefit from being a part of the evaluation. Furthermore, the process of creating a clear design will highlight ways that stakeholders, through their contributions, can enhance the relevance, credibility, and overall utility of the evaluation.

Step 7. Develop data analysis and reporting plans and feedback channels.

Formulate a plan for analyzing data collected as part of the evaluation and for reporting it back to stakeholders. This plan should outline how both qualitative and quantitative data will be analyzed, synthesized, and reported for all evaluation questions and activity standards. The plan should also outline how conclusions will be justified.

Step 8. Prepare an evaluation timetable and budget.

Develop a budget that reflects your agencies or funding agency's format. Normally, these budgets are created in a column format with direct and indirect expenses outlined in separate sections.

Budgets clearly delineate costs. You can develop your budget by ensuring that it fulfills some

Step 9. Prepare an evaluation implementation plan and share it with appropriate staff and stakeholders

Self-Check – 3	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 pts

1. List the Procedures for Assessing Emergency Risk

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating - 10points** **Unsatisfactory - below 10 points**

Information sheet – 4- Prioritizing needs promptly and accurately

4.1. Prioritizing crop production emergences evaluation

In Ethiopia, where about four-fifths of the population depends on the agriculture sector for their livelihood, the effects of the El Niño-induced drought in 2015/16 were devastating. Between 50 and 90 percent of crop production was lost, farmers' incomes dwindled and food insecurity soared. Although the performance of the subsequent 2016 meher season was relatively positive, with the Government estimating a 19 percent improvement on the previous year's production, the gains made were again undermined by below-average and erratic 2017 belg (March to May) rains, which exacerbated humanitarian needs across the country. According to the recent countrywide assessment, belg (spring) season rainfall was below normal in almost all belg-receiving woredas across the country in terms of onset, distribution and/or cessation. The lack of rainfall during the first half of 2017 resulted in a decrease in the area and yield of belg-dependent crops (such as wheat, teff and maize) planted – a reduction of up to 60 percent in the worst-affected woredas.

Emergency priorities set overall priorities for the response framework that UNHCR applies in an emergency. They can be operational zed via processes associated with needs assessment, planning, programming and monitoring.

- ✓ Needs assessment. Emergency priorities can be set on the basis of needs assessments. Needs assessments may also be shaped by response priorities where evident priorities have been defined before a full needs assessment can occur.
- ✓ Strategic planning. Emergency priorities should be guided by an initial protection and solutions strategy developed within two weeks of an emergency. (See Protection and solutions strategy.) They are confirmed in a protection and solutions strategy produced 3 to 6 months later, which lays out the overall protection priorities of the emergency response and forms the foundation of key inter-agency planning documents (such as the Strategic Response Plan or Refugee Response Plan).
- ✓ Programming. Emergency priorities should be included in UNHCR's programming cycle and reflected practically in objectives, outputs and allocation of resources.
- ✓ Monitoring. Emergency priority indicators should be used to monitor the progress of emergency response priorities, over time and in different areas of the response.

- ✓ Evaluation. Emergency priorities, as reflected in strategic planning documents, are evaluated during UNHCR or inter-agency evaluations.

Appropriate crop genotypes for satisfactory yield under existing and predicted saline conditions. Appropriate planting procedures to minimize salinity near the vicinity of seed Maintaining soil water at relatively high levels for plant Appropriate soil management such as tillage, ploughing, sanding, and chemical amendments, mineral fertilizers, organic manures, and mulching to improve soil organic matter and increased soil percolation An efficient water distribution system and irrigation scheduling

- **Methods of prioritize emergencies**

- ✓ Emergency Rooms Use Triage. Who lives with emergencies every day?
- ✓ Set Up Boundaries, If Possible.
- ✓ Set Up Boundary Overrides.
- ✓ Triage Using Both Upside and Downside.
- ✓ If Ignoring It Will Get You Fired, Take It.
- ✓ Prioritize According to Damage Control.
- ✓ Prioritize According to Benefit.
- ✓ Use Your Rankings to Prioritize in the Moment

Self-Check – 4	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pts

1. Define prioritize emergencies
2. Explain the Methods of prioritize emergencies

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

LG #54	LO #4- Act in a crop production emergency

Instruction sheet

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

- Implementing the plan of action
- Operating and improvising equipment techniques safely
- Identifying and implementing strategies
- Monitoring the condition of all staff and others assisting constantly
- Acquiring and documenting the information required
- Notifying emergency services as necessary.
- Changing the plan of action in accommodating the situation Variable**.**
- Demonstrating casualty evacuation methods where relevant
- Implementing organizational procedures, policies and legal requirements

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

- Implement the plan of action
- Operate and improvising equipment techniques safely
- Identify and implementing strategies
- Monitor the condition of all staff and others assisting constantly
- Acquire and documenting the information required
- Notify emergency services as necessary.
- Change the plan of action in accommodating the situation Variable**.**
- Demonstrate casualty evacuation methods where relevant
- Implement organizational procedures, policies and legal requirements

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” which are placed following all 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

Information sheet- 1 Implementing the plan of action

1.1. Emergency plan action

Planning:

Countries and communities will use different frameworks and tools to develop preparedness and emergency response plans. The resulting plans may vary from one context to another because of the different risks and capacities to be found in communities and countries, and because different tools have been used. It is crucial that emergency preparedness plans between and within sectors and levels are aligned and do not generate unnecessary fragmentation or duplication. The planning process should involve broad stakeholder consultation and must be aimed at developing consensus and agreement not only on content, but also with regard to roles in implementation and financing. Different plans may exist in a country for health emergency preparedness, notably:

(i) A national action plan to which stakeholders commit to improving a country's level of preparedness over a given period of time

(ii) An all-hazard national health emergency response plan that sets out the common processes and responsibilities for all health sectors, all hazard responses

(iii) Contingency plans developed for priority hazards that are linked to the national action plan and all-hazard plan.

Implementing:

Successfully implementing a national action plan requires a number of things. A coordination mechanism, involving stakeholders with responsibilities identified in the national action plan, should oversee and monitor progress. The participation of stakeholders in planning is essential to ensure commitment to, and ownership of, emergency preparedness measures. The priorities for strengthening emergency preparedness should be described clearly in the action plan; responsibilities and accountabilities should be clearly identified; and sufficient resources should be available to put actions into practice over the duration of the plan. Another important factor is

the need to limit the time lag between development and implementation of the plan, to maintain momentum and commitment to emergency preparedness

Crop production performance and its potential are determined by the bi-modal rainfall in the mainly arid to semi-arid areas. The two main agricultural seasons are; Gu (short rains) from April to June and Deyr (long rains) from October to December.

Besides the major benefit of providing guidance during an emergency, developing the plan has other advantages. You may discover unrecognized hazardous conditions that would aggravate an emergency situation and you can work to eliminate them.

The planning process may bring to light deficiencies, such as:

- ✓ The lack of resources (equipment, trained personnel, supplies), or
- ✓ Items that can be rectified before an emergency occurs.

In addition an emergency plan promotes safety awareness and shows the organization's commitment to the safety of workers.

The lack of an emergency plan could lead to severe losses such as multiple casualties and possible financial collapse of the organization. An attitude of "it can't happen here" may be present. People may not be willing to take the time and effort to examine the problem. However, emergency planning is an important part of company operation. Since emergencies will occur, preplanning is necessary to prevent possible disaster. The stress of the situation can lead to poor judgment resulting in severe losses.

Emergency Plan action includes

- ✓ Search procedures, ie, search of likely routes followed, systematic search, voice or whistle contacts
- ✓ Evacuations
- ✓ Control of fire
- ✓ Administering of first aid
- ✓ Assistance to injured party member
- ✓ Retrieval of party member
- ✓ Activity - specific rescue techniques

Self-Check –1	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 5 pn'ts for each

1. Explain emergency Plan action includes

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 5 points** **Unsatisfactory - below 5 points**

Information Sheet 2- Operating and improvising equipment

2.1. Operating farm machinery and equipment

Tractors are the main cause of accidental deaths on farms. Over the years, many farmers, farm workers and others living on or visiting farms, have been killed or seriously injured falling from moving tractors, being run over by tractors, or being crushed when a tractor rolls sideways or backwards. This leaflet gives advice on how to work safely with mobile and stationary agricultural machinery particularly when carrying out maintenance and dealing with blockages. See 'Find out more' at the end of the leaflet for sources of detailed guidance on working safely with specific types of machines, eg round balers.

Machinery accidents are caused by a range of factors including:

- ✓ using a machine that is unsuitable for the task;
- ✓ failing to follow a safe system of work;
- ✓ Unsafe methods for clearing blockages or making adjustments;
- ✓ failing to follow safe operating or 'Safe Stop' procedures;
- ✓ Guards and other safety devices missing or defective;
- ✓ Lack of operator training;
- ✓ Poor maintenance

Types of agricultural machinery and their uses:

- ✓ Mowers.
- ✓ Backhoe.
- ✓ Harrow.
- ✓ Cultivator.
- ✓ Rake.
- ✓ Tractor.
- ✓ Combine Harvester.
- ✓ Sprayers.

Many agricultural machines have potentially dangerous moving parts, which can cause serious or fatal injuries. For example:

- ✓ Balers – pick-ups, twine mechanisms and moving rear doors;
- ✓ forage harvesters – chopping cylinders;
- ✓ Combine harvesters – augers in the grain tank and the header unit;
- ✓ potato harvesters – rotating rollers and conveyors;
- ✓ slurry tankers – power take-off (pto) shafts;

- ✓ Bale and straw choppers – chopping mechanisms;
- ✓ Tractor – hitch mechanisms, ptos and pto shafts;
- ✓ Power harrows – rotating tines;
- ✓ Feeder wagons – rotating components in the mixing chamber.

Example of control hazard of tractor

Regularly check for hazards relating to tractors, attached implements and field conditions. Hazard areas could include mechanical parts, operator training, other people, work procedures, unsafe jacking, climatic conditions, chemicals used, uneven terrain, and any other potential causes of an injury or a hazardous incident. Keep a record to ensure identified hazards are assessed and controlled.

When operating a tractor ·

- ✓ Drive at speeds slow enough to retain control over unexpected events.
- ✓ Reduce speed before turning or applying brakes.
- ✓ Watch out for ditches, logs, rocks, depressions and embankments.
- ✓ On steep slopes, without a trailed implement, reverse up for greater safety.
- ✓ Engage the clutch gently at all times, especially when going uphill or towing.
- ✓ Use as wide a wheel track as possible on hillsides and sloping ground.
- ✓ Descend slopes cautiously in low gear, using the motor as a brake.
- ✓ Never mount or dismount from a moving tractor.
- ✓ Ensure the park brake is on and operating effectively before dismounting.
- ✓ Take short breaks regularly when working long hours.

When towing implements ·

- ✓ Fit attachments according to the manufacturer's instructions.

- ✓ Always attach implements to the draw bar or the mounting points provided by the manufacturer.
- ✓ Never alter, modify or raise the height of the draw bar unless provided for by the manufacturer.
- ✓ Regularly check safety pins on towed lift-wing implements, to ensure they are not worn.
- ✓ Ensure all guards on towed implements are in place before operating.
- ✓ Never hitch above the centerline of the rear axle, around the axle housing or to the top link pin.
- ✓ Never adjust or work on implements while they are in motion.
- ✓ Never attach implements unless the PTO shaft is guarded. · When parking, always lower the three-point linkage and towed implement.

To avoid strain injury

- ✓ Adjust the tractor seat for back support and comfort.
- ✓ When buying a tractor, ensure seating is safe and comfortable.
- ✓ Check seat height, seat depth, backrest height and angle, fore and aft movement, seat tilt, firm padding, partial pivoting (if you have to spend long periods looking behind you), and vibration-absorbing suspension.
- ✓ Dismount every hour or so, and spend 5 or 10 minutes doing something active.
- ✓ Plan for your next tractor to include suitably low steps, handgrips, adequate doorway and cab space, and a safe mounting platform.
- ✓ Dismount by climbing down - not jumping down - and use each provided foot and handhold.

Self-Check –2	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions 10 pn'ts for each

1. List the factors couse the machinery accidents
2. Explain and types of agricultural machinery and their Uses

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 10 points** **Unsatisfactory - below 10 points**

Information Sheet 3 - Identifying and implementing strategies

3.1. Requirements of strategies

Projects are strategic and encounter strategic issues in their operating context that have not been addressed in parent corporate strategy. These strategic issues, emanating from changes in the operating context, require interpretation and an appropriate response through the emergence of strategy. Realized strategies are often a by-product of an organization's intended strategy (i.e., the firm's plans), the firm's deliberate strategy (i.e., the portions of the intended strategy that an organization continues to pursue over time), and its emergent strategy (i.e., what the firm does in response to unexpected. An emergent strategy is a pattern of action that develops over time in an organization in the absence of a specific mission and goals, or despite a mission and goals. Emergent strategy is sometimes called realized strategy. When a deliberate strategy is realized, the result matches the intended course of action.

It occurs from the day to day decisions made to run the company at the tactical and routine level of the company. For example, Sam Walton, the founder of Walmart, built his stores close to his first store in rural settings rather in big population cities, because it was easier from him to manage.

For example, Sam Walton, the founder of Walmart, built his stores close to his first store in rural settings rather in big population cities, because it was easier from him to manage.

3.1.1. Establishing an Emergency Response Policy of crop production

A policy is a statement of management's commitment. The policy statement should be brief, but it must include the following:

- ✓ Management's commitment to protect the safety and health of employees in case of emergency;
- ✓ The organization's basic emergency response philosophy;
- ✓ Responsibilities of employees at all levels; and
- ✓ Consequences of non-compliance to the policy.

The policy should be:

- ✓ stated in clear, unambiguous, and unequivocal terms;
- ✓ signed by the incumbent Chief Executive Officer;
- ✓ kept up-to-date;
- ✓ communicated to each employee;
- ✓ understood by all employees; and
- ✓ Adhered to in all work activities.

Communicate the Policy

Tell everyone about your emergency response policy. Some ways to do this are to:

- ✓ Use it in training and orientation sessions;
- ✓ Distribute copies to managers, supervisors, co-workers, contractors and visitors;
- ✓ Post it in the workplace; and
- ✓ Use it in new employee orientation.

Self-Check –3	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. Explain the Identification and implementation strategies (10 pts)

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 10 points** **Unsatisfactory – below 10 points**

Information sheet -4 monitoring the condition of all staff and others assisting constantly

4.1. Inspect the workplace for safety hazards

Hazards can be introduced over time as workstations and processes change, equipment or tools become worn, maintenance is neglected, or housekeeping practices decline. Setting aside time to regularly inspect the workplace for hazards can help identify shortcomings so that they can be addressed before an incident occurs. Establish an active workplace safety and health safety committee. Make daily safety inspections part of some employees' jobs. Keep employees informed about safety inspections, injury and illness statistics, and other safety-related issues. Give everyone a meaningful activity that supports safety. The safety and health of our employees comes first. Management is committed to doing everything possible to prevent injuries and to maintain a healthy environment.

The most important concept to remember is that you are responsible for your own safety and the safety of others. Most safety practices are common sense. Unfortunately, they can be forgotten or overlooked unless you make safe practices a habit or an instinct. Certification to an International Occupational Health and Safety standard demonstrates that an organization has considered how they will identify, manage and control health and safety risks.

Accountability of all staff member

Employees who follow safety procedures may be able to function better in their jobs, identify other safety procedures, and increase production. This can lead to better overall business operations, lower costs, and higher revenues. Also, an employee who is allowed a voice in introducing and implementing safety procedures may be more

motivated and committed to the company, since the company encourages employee involvement and recognizes employees.

- ✓ All supervisors are responsible for ensuring that their employees are trained in approved work procedures to obtain optimal output without incidents and injuries and to ensure that employees follow safe work methods and all related regulations.
- ✓ All personnel are required to support the Emergency Response Policy.
- ✓ All personnel will be held accountable for implementing this program.
- ✓ All relevant laws and regulations are incorporated in our program as minimum standards.
- ✓ All employees are responsible for working safely and for following the company's safety rules. Contact your supervisor, health and safety committee member or human resources department for further information.

General Safety

By doing things right, you and your co-workers will commit yourselves to safety on the job and everyone will benefit. Accidents occur in many ways but most often can be traced back to one of two basic factors: ignorance or carelessness. You must always be concerned with your own safety and with the safety of others around you.

The following is a general list of safety precautions you must observe in any work area:

- ✓ Don't fool around. "Horseplay" is one of the biggest causes of injuries on the job and it may be grounds for dismissal.
- ✓ Never work while under the influence of drugs or alcohol, as you are a hazard to yourself and your co-workers.
- ✓ Pay particular attention to moving objects, such as equipment, dollies, mixers, and slicers.
- ✓ Walk; do not run, in the work areas.

- ✓ Stay completely alert on the job.
- ✓ Avoid back strain by lifting properly.

Self-Check –4	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. Explain the accountability of all staff member (10 pts)

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 10 points** **Unsatisfactory – below 10 points**

Information sheet- 5 Acquiring and documenting the information

5.1. Definition

Documentation is a written or printed paper that bears the original, official, or legal form of crop production and storage emergences and can be used to furnish decisive evidence or information. b. Something, such as a recording or a photograph that can be used to furnish evidence or information. The Strategic Framework for Emergency Preparedness is a unifying framework which identifies the principles and elements of effective country health emergency preparedness. It adopts the major lessons of previous initiatives and lays out the planning and implementation process by which countries can determine their priorities and develop or strengthen their operational capacities.

The framework capitalizes on the strengths of current initiatives and pushes for more integrated action at a time when there is both increased political will and increased funding available to support preparedness efforts. The health emergency preparedness framework advocates for prioritizing financial and other resources for community and country emergency preparedness, and for mobilizing and sustaining increased domestic and international investment for these. In computer hardware and software product development, documentation is the information that describes the product to its users. The term is also sometimes used to mean the source information about the product contained in design documents, detailed code comments, white papers, and blackboard session notes

- Two types of documentation
    - ✓ User documentation.
    - ✓ Technical documentation.

- Generally, the documentation processes include the following activities:

  - ✓ Identify and Name the Process.
  - ✓ Define the Process Scope.
  - ✓ Explain the Process Boundaries.
  - ✓ Identify the Process Outputs.
  - ✓ Identify the Process Inputs.
  - ✓ Brainstorm the Process Steps.
  - ✓ Organize the Steps Sequentially.
  - ✓ Describe who is Involved.

Self-Check – 5	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer five point for each

1. Define the documentation
2. List the types of documentation of crop production emergences
3. Explain the different activities should be followed during documentation

Note: Satisfactory rating – 15 points Unsatisfactory - below 15 points
You can ask you teacher for the copy of the correct answers.

Information sheet- 6 Notifying emergency services as necessary

6.1. Emergency services

An emergency service is any health care service provided to evaluate and/or treat any medical condition such that a prudent layperson possessing an average knowledge of medicine and health, believes that immediate unscheduled medical care is required. An emergency is any unplanned event that can cause deaths or significant injuries to students, employees, customers or the public; or that can disrupt operations, cause physical or environmental damage, or threaten the facility's financial standing or public image. Obviously, numerous events can be "emergencies," including:

- ✓ Fire
- ✓ Hazardous materials incident
- ✓ Flood or flash flood
- ✓ Hurricane
- ✓ Tornado
- ✓ Winter storm
- ✓ Earthquake
- ✓ Communications failure
- ✓ Radiological accident
- ✓ Civil disturbance
- ✓ Loss of key supplier or customer
- ✓ Explosion

The emergency services are organizations that work to ensure public safety by addressing different types of emergency. Some agencies exist solely to address particular types of emergency, while others deal with ad hoc emergencies as part of their normal day-to-day responsibilities. Many agencies also engage in community awareness and prevention programs to help the public avoid, detect and report emergencies effectively.

The three most commonly used emergency services are the police, fire service and emergency medical service. Other services available include mountain rescue, cave rescue, coastguard and life boat. You must only call the emergency services number in the case of a real emergency. You should not call them because you get locked out of your house or if you have a nose bleed for example.

Some of the emergency services are:

- ✓ Police Search and Rescue
- ✓ State Emergency Service
- ✓ Fire Brigade
- ✓ Ambulance Service
- ✓ Land Management Authorities, eg, National Parks, Forestry

Police

The police deal with the safety of the community and act to reduce crime towards people and property. As a tourist the most likely reason to contact the police would be if your purse was stolen.

Fire Service

The fire service deal with; fire and rescue operations. They also attend other emergencies and it is quite common to see a fire engine at a car crash.

Emergency medical service

The emergency medical service provides ambulances and staff to deal with medical emergencies. An ambulance would usually be called if someone is hurt too badly to be taken to the ER by a friend.

Mountain rescue

Mountain rescue helps those who are lost or injured on Britain's mountains, fell or moorland. Mobile phone signal is unreliable in these areas and it is recommended that if you get a signal that you stay in that location. Do not rely on your mobile phone to help you on mountains.

Self-Check – 6	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer 5 point for each

1. List some of Emergency services
2. Explain Emergency services

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points
You can ask you teacher for the copy of the correct answers.

Information sheet- 7 Changing the plan of action

7.1. **Developing the Plan**

Natural hazards include; floods, landslides, fires, extreme weather events and earthquakes. Disaster preparedness activities are important as a precursor for a more effective humanitarian response and for reducing humanitarian caseloads during disasters. Experience confirms that an effective humanitarian response at the onset of a crisis is heavily influenced by the level of preparedness planning of responding agencies, as well as the capacities and resources available at all levels.

There are six key steps to developing an emergency plan:

- ✓ Establish the planning team.
- ✓ Assess the risks and company capabilities.
- ✓ Develop the plan.
- ✓ Implement the plan.
- ✓ Evaluate effectiveness of the plan by drills and other means.
- ✓ Improve the plan continuously.

Step 1: Establish the Planning Team

Effective emergency response planning requires a team approach. The company should combine various skill sets and choose representatives from all levels of the organization. policy is required to ensure that appropriate resources are made available and that all employees understand the importance of response planning activities. The highest level of management must indicate the company's commitment.

Step 2: Assess the Risks and Company Capabilities

- ✓ Determine the types of potential and actual hazards.
- ✓ Estimate the probability of the hazard occurring.
- ✓ Estimate the number of people likely to be exposed.
- ✓ Estimate the extent of losses arising out of potential emergencies.

Step 3: Develop the Plan

Set a clear objective in order to maintain focus

Building an effective emergency response plan can be a significant undertaking. Prioritize your efforts. Use a step-by-step approach to develop the plan.

Review existing plans

Sources you might consult:

An older plan in existence may be helpful as a starting point.

A community emergency response plan is usually available through your local fire department.

Plans may be found through industry associations and other companies.

Sample emergency response plans are available on the internet.

7.1.1. Determine your organization's emergency preparedness needs

Identify the key functions of the emergency response team members needed to handle each potential emergency situation.

Step 4: Implement the Plan

Checklists & Action Guides

These are short and simple action lists designed for simple situations or for use by highly trained individuals.

Response Plans

Detailed response plans for each likely event. For example, a fire response plan details exactly who does what, when and how.

Emergency Management Plan

A comprehensive plan detailing management activities for prevention, preparedness, response and recovery.

Step 5: Evaluate Effectiveness of the Plan

A review is best done in conjunction with an annual drill. The drill will likely identify weaknesses and recommend actions for improvement. Management and employee health and safety representatives should participate in all steps including the annual review of the plan.

Review & analyze

- ✓ all incidents that occurred in the past year;
- ✓ all corrective actions taken following any incidents;

- ✓ all corrective actions taken following any drill or exercise; details of specific changes that have occurred in the workplace; details of any changes to prevention-based policies or procedures; and the risk assessment on which the plan is based.

Step 6: Improve the Plan Continuously

Make changes to implement corrective actions to improve the effectiveness of the existing response plan.

Self-Check – 7	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer 5 point for each

1. List six key steps to developing an emergency plan
2. Explain the natural hazards

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points
You can ask you teacher for the copy of the correct answers.

Information sheet- 8 Demonstrating Casualty evacuation methods

8.1. Evacuation methods

Feeling frightened and panicked could make things worse for you. Feeling this way will increase your blood pressure and pulse causing more pain and more bleeding. This will in turn cause more anxiety and panic. It becomes a vicious circle. Not only is it important to reassure the casualty to make them feel better, this also lowers the blood pressure and pulse rate and therefore lowers the amount of bleeding and pain. Think of what kind of things could alleviate some of this anxiety and panic.

Table 8.1. Definite dos and don'ts regarding ways in which you can reassure the casualty.

DO	DON'T
Be as honest as possible.	Don't tell them bad news eg 'Emma is dead.' If the casualty asks about another casualty who is dead or critical, just say 'Everything is being done for them.'
Let the casualty know that help is on its way.	Don't react to the situation ie don't shout 'Oh my goodness, look at Bob.' or 'Gee, look at all that blood.'
If an ambulance has been called, let the casualty know this.	
Stay with the casualty.	Do not leave the casualty.
Try to make them comfortable with minimal movement eg blankets, icepack.	Don't move the casualty unnecessarily.
Tell the casualty your name, find out theirs and use it eg 'How are you doing, Bob?' and 'Help is on its way, Bob.'	Don't tell the casualty to look at the wounds.
Act confidently, instilling trust in the casualty.	Don't fall apart (eg do not say 'I don't know what to do').

- **Evacuation procedures**

✓ If the fire alarm sounds, immediately evacuate the building by the nearest exit. Do not use elevators

- ✓ Collect the necessary items. If it is safe to do so, gather your personal items quickly. You may not be allowed to re-enter your building for some time.
- ✓ Leave by nearest exit. Evacuate the building immediately by the nearest safe exit or as advised by the building emergency team members /BET/
- ✓ Walk. When evacuating the building, employees should WALK not run, grasp handrails, remain QUIET and CALM and follow emergency instructions. Note; if you meet firefighters coming up, stay next to the outside wall of the stairs in single file
- ✓ Emergency aid. if requested, assist BET members in the performance of their duties
- ✓ Assembly areas. Proceed to the designated assembly area and check in with the BET members in charge.
- ✓ Remain at site. Please REMAIN at the assembly area until released by person of authority / professional responder, BET members, or security officer/

Self-Check – 8	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer 10 point for each

1. Explain the evacuation procedures and methods

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points
You can ask you teacher for the copy of the correct answers.

Information sheet- 9 Implementing organizational procedures, policies and legal requirements

9.1. Implementing organizational procedures and policies

Policies and procedures for disasters and emergencies are essential for every organization. They provide: a framework for action (within your organization); decisions grounded in legitimate authority; written documentation so the organization can keep track of what's agreed; and a starting point for building understanding for everyone in the organisation.The Disaster Plan can itself be a starting point for organizational policies and procedures. Further details may be needed in the organization's policy and procedures manuals.

Policies and Procedures for Disasters and Emergencies

Policies and procedures for disasters and emergencies are essential for every organization. Policies and procedures provide:

- ✓ A framework for action (within your organization)
- ✓ Decisions grounded in legitimate authority
- ✓ Written documentation so the organization can keep track of what's agreed.
- ✓ A starting point for building understanding for everyone in the organization

Policy creation is an ongoing process. It's never finished. Policy creation in organizations also sits within legislative, contractual and other wider framework within which your organization operates (awards, legislation, Government policy etc.). In relation to disasters and emergencies every organization needs policies that cover all the elements in the Disaster Plan:

Step 1: Leadership

- ✓ Mandate & approach
- ✓ Objectives to be achieved
- ✓ Roles: staff and volunteers

Step 2: Building Networks

- ✓ Local Emergency Management Committee & Plan & Emergency services
- ✓ Community organizations
- ✓ Identifying vulnerable clients

Step 3: Know Your Risks

- ✓ Past and possible future disasters and emergencies
- ✓ Risk register (resources)

Step 4: Manage Your Risks

- ✓ Prevention and Adaption
- ✓ Risk Register (your organization)
- ✓ Business Continuity Plan
- ✓ Insurance
- ✓ Preparing for community recovery
- ✓ Disaster and emergency policies and procedures
- ✓ Triggers and key messages identified and communicated

Step 5: Preparing Others

- ✓ Staff and volunteer awareness and knowledge

Step 6: Learning and improving

- ✓ Testing, monitoring and reviewing
- ✓ Learning and sharing

Disaster Plan can itself be a starting point for organizational policies and procedures. Further details may be needed in the organization's policy and procedures manuals. Useful polices can include:

- ✓ Organizational mandate for disaster resilience
- ✓ Objectives to be achieved in the face of disasters and emergencies
- ✓ Relationships with local emergency management and services and associated processes (committee memberships etc.).
- ✓ Identifying vulnerable clients - Processes and systems
- ✓ Staff and volunteer disaster and emergency training
- ✓ Client disaster preparedness

As these policies are developed further detail can be added, for example:

- ✓ emergency procedures, including: an effective response to an emergency
- ✓ evacuation procedures
- ✓ notifying emergency service organizations at the earliest opportunity

- ✓ medical treatment and assistance, and effective communication between the person authorized to coordinate the emergency response and all people at the workplace
- ✓ testing of the emergency procedures including the frequency of testing, and
- ✓ Information, training and instruction to relevant workers in relation to implementing the emergency procedures.

- **Emergency policies and procedures should include the following types of practical information:**

- ✓ emergency contact details for key personnel who have specific roles or responsibilities under the emergency plan, for example fire wardens, floor wardens and first aid officers
- ✓ contact details for local emergency services, for example police, fire brigade and poison information centre a description of the mechanisms for alerting people at the workplace to an emergency or possible emergency, for example siren or bell alarm
- ✓ evacuation procedures including arrangements for assisting any hearing, vision or mobility-impaired people
- ✓ a map of the workplace illustrating the location of fire protection equipment, emergency exits, assembly points
- ✓ Triggers and processes for advising neighboring businesses about emergencies, and the post-incident follow-up process, for example notifying the regulator, organizing trauma counseling or medical treatment.
- ✓ Procedures for testing the emergency plan including the frequency of testing must be included.

Self-Check – 9	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer 5 point for each

1. Discus policies and procedures of emergences
2. Explain and list the steps of disaster Plan

Note: Satisfactory rating – 10 points Unsatisfactory - below 10 points
You can ask you teacher for the copy of the correct answers.

LG #55	LO #5- Apply essential first aid techniques

Instruction sheet

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

- Minimizing immediate risk and hazard
- Assessing the casualty's injuries and vital signs
- Reassuring casualty in a caring and calm manner sought
- Providing first aid care
- Requiring first aid assistance

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

- Minimize immediate risk and hazard
- Assess the casualty's injuries and vital signs
- Reassure casualty in a caring and calm manner sought
- Provide first aid care

  Require first aid assistance

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
3. Follow the instructions described below.
4. 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.
5. Accomplish the “Self-checks” which are placed following all information sheets.

Information Sheet 1- Minimizing immediate risk and hazard

1.1. Controlling immediate risk

All workplace hazards (chemical, physical, etc.) can be minimized /controlled by a variety of methods. The goal of controlling hazards is to prevent workers from being exposed to occupational hazards. Some methods of hazard control are more efficient than others, but a combination of methods usually provides a safer workplace than relying on only one method. Some methods of control are cheaper than others but may not provide the most effective way to reduce exposures. .

Ways of minimizing immediate risks;

- ✓ Observe your workplace;
- ✓ Investigate complaints from workers;
- ✓ Examine accident and near-miss records;
- ✓ Examine sickness figures;
- ✓ Use simple surveys to ask your co-workers about their health and safety concerns;
- ✓ Use check-lists to help you inspect your workplace;
- ✓ Learn the results of inspections that are done by the employer, the union or anyone else;

1.2. First aid Hygiene and Infection Control

If you are a first aider in the workplace, the risk of being infected with a blood borne virus (BBV) while carrying out your duties is small. There have been no recorded cases of HIV, or Hepatitis, being passed on during mouth-to-mouth resuscitation.

However the following precautions are strongly recommended:

1. Wash your hands before and after treating a casualty

2. Always protect yourself with waterproof dressings on all cuts and abrasions before administering first aid.

3. Use plastic gloves and aprons.

4. Use small yellow clinical waste bags for disposal of contaminated soft materials and dispose of safely in the clinical waste bin located in the First Aid Room.

5. Any clothing contaminated with blood, vomit etc. may be cleansed in any ordinary washing machine using a biological washing powder at the appropriate temperature.

6. If direct skin contact with another person's body fluid occurs, the area should be washed as soon as possible with ordinary soap and water. For affected areas of lips, mouth, eye or broken skin, wash with cold water and seek medical advice.

7. Needles, broken glass and sharp objects should be left untouched. Contact Estate Services (Ext. 2888) and they will arrange for the item to be disposed of correctly. If you sustain an injury from any sharp item that you suspect could be contaminated with Blood/Body Fluids. Make the wound bleed, DO NOT SUCK BLOOD, wash with soap and water, cover with a waterproof dressing, Attend accident and emergency for advice /treatment.

8. Do not attempt to clean up blood or body fluid. and they will arrange for the item to be disposed of correctly.

1.3. Basic life support (BLS)

Is the level of medical care which is used for patients with life-threatening illnesses or injuries until the patient can be given full medical care at a hospital. It can be provided by trained medical personnel, including emergency medical technicians, paramedics, and by laypersons who have received BLS training. BLS is generally used in the pre- hospital setting, and can be provided without medical equipment. Most laypersons can master BLS skills after attending a short course. Firefighter, lifeguards, and police officers are often required to be BLS certified. BLS is also immensely useful for many other professions, such as daycare providers, teachers and security personnel and social workers especially working in the hospitals and ambulance drivers. Basic life support consists of a number of life-saving techniques focused on the medicine "CAB"s (previously known as ABC. was recently changed by the American Heart Association) of pre-hospital emergency care:

A. Circulation: providing an adequate blood supply to tissue, especially critical organs, so as to deliver oxygen to all cells and remove metabolic waste, via the perfusion of blood throughout the body.

B. **Airway: t**he protection and maintenance of a clear passageway for gases (principally oxygen and carbon dioxide) to pass between the lungs and the atmosphere.

C. **Breathing**: inflation and deflation of the lungs (respiration) via the airway Healthy people maintain the CABs by themselves. In an emergency situation, due to illness (medical emergency) or trauma, BLS helps the patient ensure his or her own CABs, or assists in maintaining for the patient who is unable to do so.

Self-check 1	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Choose the best answer

1. Write the first aid hygiene and infection control **(5pts)**

You can ask you teacher for the copy of the correct answers.

Note: **Satisfactory rating – 5 points** **Unsatisfactory - below 5 points**

Information Sheet 2- Assessing casualties of injuries and vital signs

2.1. Assessing physical condition

2.1.1. Temperature

Temperature; Temperature can be recorded in order to establish a baseline for the individual's normal temperature for the site and measuring conditions. The main reason for checking body temperature is to solicit any signs of systemic infection or inflammation in the presence of a fever (temp > 38.5 °C or sustained temp > 38 °C), or elevated significantly above the individual's normal temperature. Temperature depression (hypothermia) also needs to be evaluated. It is also noteworthy to review the trend of the patient's temperature. A patient with a fever of 38 °C does not necessarily indicate an ominous sign if his previous temperature has been higher. Body temperature is maintained through a balance of the heat produced by the body and the heat lost from the body. Temperature is commonly considered to be a vital sign most notably in a hospital setting. First aid technician, in particular, are taught to measure the vital signs of: respiration, pulse, skin, pupils, and blood pressure as "the 5 vital signs" in a non-hospital setting.

2.1.2. Blood pressure

Blood pressure (BP), sometimes referred to as arterial blood pressure, is the pressure exerted by circulating blood upon the walls of blood vessels, and is one of the principal vital signs. When used without further specification, "blood pressure" usually refers to the arterial pressure of the systemic circulation. During each heartbeat, blood pressure varies between a maximum (systolic) and a minimum (diastolic) pressure. The blood pressure in the circulation is principally due to the pumping action of the heart. Differences in mean blood pressure are responsible for blood flow from one location to another in the circulation. The rate of mean blood flow depends on the resistance to flow presented by the blood vessels. Mean blood pressure decreases as the circulating blood moves away from the heart through arteries and capillaries due to viscous losses of energy. Mean blood pressure drops over the whole circulation, although most of the fall occurs along the small arteries and arterioles. Gravity affects blood pressure via hydrostatic

forces (e.g., during standing) and valves in veins, breathing, and pumping from contraction of skeletal muscles also influence blood pressure in veins.

2.1.3. Heart rate (pulse)

Is the physical expansion of the artery. Its rate is usually measured either at the wrist or the ankle and is recorded as beats per minute. The pulse commonly taken is from the radial artery at the wrist. Sometimes the pulse cannot be taken at the wrist and is taken at the elbow (brachial artery), at the neck against the carotid artery (carotid pulse), behind the knee (popliteal artery), or in the foot dorsalis pedis or posterior tibial arteries. The pulse rate can also be measured by listening directly to the heartbeat using a stethoscope. The pulse varies with age.

- ✓ A newborn or infant can have a heart rate of about 130–150 beats per minute.
- ✓ A toddler's heart will beat about 100–120 times per minute
- ✓ Older child's heartbeat is around 60–100 beats per minute
- ✓ Adolescents around 80–100 beats per minute
- ✓ Adults' pulse rate is anywhere between 50 and 80 beats per minute.
- ✓ Heart rate can vary as the body's need to absorb oxygen and excrete carbon dioxide changes, such as during physical exercise or sleep.

The measurement of heart rate is used by medical professionals to assist in the diagnosis and tracking of medical conditions. It is also used by individuals, such as athletes, who are interested in monitoring their heart rate to gain maximum efficiency from their training. Heart rate is measured by finding the pulse of the body. This pulse rate can be measured at any point on the body where the artery's pulsation is transmitted to the surface by pressuring it with the index and middle fingers; often it is compressed against an underlying structure like bone. The thumb should not be used for measuring another person's heart rate, as its strong pulse may interfere with correct perception of the target pulse.

Possible points for measuring the heart rate are:

- ✓ The ventral aspect of the wrist on the side of the thumb (radial artery).
- ✓ The ulnar artery.
- ✓ The neck (carotid artery).
- ✓ The inside of the elbow, or under the biceps muscle (brachial artery).
- ✓ The groin (femoral artery).

- ✓ Behind the medial malleolus on the feet (posterior tibial artery).
- ✓ Middle of dorsum of the foot (dorsalis pedis).
- ✓ Behind the knee (popliteal artery).
- ✓ Over the abdomen (abdominal aorta).

2.1. 4 Respiratory rate

Is also known by respiration rate, pulmonary ventilation rate, ventilation rate, or breathing frequency is the number of breaths taken within a set amount of time, typically 60 seconds.

- ✓ Normal respiratory rate is termed eupnea,
- ✓ An increased respiratory rate is termed tachypnea
- ✓ A lower than normal respiratory rate is termed bradypnea..

Average respiratory rate reported in a healthy adult at rest is usually given as 12-18 breaths per minute but estimates do vary between sources, e.g., 12–20 breaths per minute, 10–14, between 16–18, etc. With such a slow rate, more accurate readings are obtained by counting the number of breaths over a full minute.

- ✓ Average resting respiratory rates by age
- ✓ birth to 6 weeks: 30-60 breaths per minute
- ✓ 6 months: 25-40 breaths per minute
- ✓ 3 years: 20-30 breaths per minute
- ✓ 6 years: 18-25 breaths per minute
- ✓ 10 years: 15-20 breaths per minute
- ✓ adults: 12-20 breaths per minute

2.1.5 Consciousness

Is the quality or state of being aware of an external object or something within oneself. It has been defined as: subjectivity, awareness, the ability to experience or to feel, wakefulness, having a sense of selfhood, and the executive control system of the mind. Despite the difficulty in definition, many philosophers believe that there is a broadly shared underlying intuition about what consciousness is. "Anything that we are aware of at a given moment forms part of our consciousness, making conscious experience at once the most familiar and most mysterious aspect of our lives."

Consciousness is assessed by observing a patient's arousal and responsiveness, and can be seen as a continuum of states ranging from full alertness and comprehension, through disorientation, delirium, loss of meaningful communication, and finally loss of movement in response to painful stimuli. Issues of practical concern include how the presence of consciousness can be assessed in severely ill, comatose, or anesthetized people, and how to treat conditions in which consciousness is impaired or disrupted.

Self-Check – 2	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. The quality or state of being aware of an external object or something within oneself is called _____ (5 points)

A. Consciousness B. blood pressure C. coma D. pulse rate

2. Write the things to be checked during assessment of physical condition. (5points)

Note: **Satisfactory rating - 10 points Unsatisfactory - below 10 points**
You can ask you teacher for the copy of the correct answers.

Information Sheet 3- Reassuring casualty in a caring and calm manner sought

3.1. **Reassure the casualty**

Imagine you are hurt in a workplace accident. You can see blood on your leg and you think you've broken your arm. You've twisted your ankle and you're also in considerable pain and feeling a bit dizzy. You will probably be feeling frightened and panicked or confused. Feeling frightened and panicked could make things worse for you. Feeling this way will increase your blood pressure and pulse causing more pain and more bleeding. This will in turn cause more anxiety and panic. It becomes a vicious circle.

Not only is it important to reassure the casualty to make them feel better, this also lowers the blood pressure and pulse rate and therefore lowers the amount of bleeding and pain. Think of what kind of things could alleviate some of this anxiety and panic.Fo**r** more information refer LO 4 information sheet 8.

Self-Check – 3	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. What are the dos and don’ts regarding ways in which you can reassure the casualty? (5 points)

Note: **Satisfactory rating - 5 points** **Unsatisfactory - below 5 points**

You can ask you teacher for the copy of the correct answers.

Information Sheet 4- Providing First aid care

4.1. First aid for bleeding and injuries

4.1.1Bleeding

Bleeding refers to the loss of blood. Bleeding can happen inside the body (internally) or outside the body (externally). It may occur:

- Inside the body when blood leaks from blood vessels or organs
- Outside the body when blood flows through a natural opening (such as the vagina, mouth, or rectum)
- Outside the body when blood moves through a break in the skin

Always seek emergency assistance for severe bleeding, and if internal bleeding is suspected. Internal bleeding can rapidly become life threatening, and immediate medical care is needed. Serious injuries don't always bleed heavily, and some relatively minor injuries (for example, scalp wounds) can bleed quite a lot. People who take blood-thinning medication or who have a bleeding disorder such as hemophilia may bleed excessively and quickly because their blood does not clot properly.

Bleeding in such people requires immediate medical attention.

- ✓ Direct pressure will stop most external bleeding, and is the most important first aid step.
- ✓ Always wash your hands before (if possible) and after giving first aid to someone who is bleeding, in order to avoid infection. –
- ✓ Try to use latex gloves when treating someone who is bleeding. Latex gloves should be in every first aid kit. People allergic to latex can use a non-latex, synthetic glove. You can catch viral hepatitis if you touch infected blood, and HIV can be spread if infected blood gets into an open wound -- even a small one.
- ✓ Although puncture wounds usually don't bleed very much, they carry a high risk of infection. Seek medical care to prevent tetanus or other infection.

Causes

Bleeding can be caused by injuries or can occur spontaneously. Spontaneous bleeding is most commonly caused by problems with the joints or the gastrointestinal or urogenital tracts.

Symptoms

- ✓ Blood coming from an open wound
- ✓ Bruising
- ✓ Shock, which may cause any of the following symptoms:
- ✓ Confusion or decreasing alertness
- ✓ Clammy skin
- ✓ Dizziness or light-headedness after an injury
- ✓ Low blood pressure

First Aid

First aid is appropriate for external bleeding. If bleeding is severe, or if shock or internal bleeding is suspected, get emergency help immediately.

- ✓ Calm and reassure the person. The sight of blood can be very frightening
- ✓ If the wound is superficial, wash it with soap and warm water and pat dry. Superficial wounds or scrapes are injuries that affect the top layers of skin and bleeding from such wounds is often described as "oozing," because it is slow.
- ✓ Lay the person down. This reduces the chances of fainting by increasing blood flow to the brain. When possible, raise up the part of the body that is bleeding.
- ✓ Remove any obvious loose debris or dirt from a wound. If an object such as a knife, stick, or arrow becomes stuck in the body, DO NOT removes it. Doing so may cause more damage and may increase bleeding. Place pads and bandages around the object and tape the object in place
- ✓ Put pressure directly on an outer wound with a sterile bandage, clean cloth, or even a piece of clothing. If nothing else is available, use your hand. Direct pressure is best for external bleeding, except for an eye injury.

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DO NOT

- ✓ Do not apply a tourniquet to control bleeding, except as a last resort. Doing so may cause more harm than good. A tourniquet should be used only in a life-threatening situation and should be applied by an experienced person

- ✓ If continuous pressure hasn't stopped the bleeding and bleeding is extremely severe, a tourniquet may be used until medical help arrives or bleeding is controllable.
- ✓ It should be applied to the limb between the bleeding site and the heart and tightened so bleeding can be controlled by applying direct pressure over the wound.
- ✓ To make a tourniquet, use bandages 2 to 4 inches wide and wrap them around the limb several times. Tie a half or square knot, leaving loose ends long enough to tie another knot. A stick or a stiff rod should be placed between the two knots. Twist the stick until the bandage is tight enough to stop the bleeding and then secure it in place.

4.1.2 Crush injuries

A crush injury occurs when a body part is subjected to a high degree of force or pressure, usually after being squeezed between two heavy objects. Damage related to crush injuries includes:

- ✓ Bleeding
- ✓ Bruising
- ✓ Compartment syndrome (increased pressure in an arm or leg that causes serious muscle, nerve, blood vessel, and tissue damage)
- ✓ Fracture
- ✓ Laceration (open wound)
- ✓ Nerve injury
- ✓ Secondary infection

First Aid

- ✓ Stop bleeding by applying direct pressure.
- ✓ Cover the area with a wet cloth or bandage, then raise the area above the level of the heart, if possible.
- ✓ Call your local emergency number (such as 911) or local hospital for further advice.

4.1.3. First aid for burns injuries

Causes

Burns can be caused by dry heat (like fire), wet heat (such as steam or hot liquids), radiation, friction, heated objects, the sun, electricity, or chemicals. Thermal burns are the most common

type. Thermal burns occur when hot metals, scalding liquids, steam, or flames come in contact with your skin. These are frequently the result of fires, automobile accidents, playing with matches, improperly stored gasoline, space heaters, and electrical malfunctions. Other causes include unsafe handling of firecrackers and kitchen accidents (such as a child climbing on top of a stove or grabbing a hot iron). Burns to your airways can be caused by inhaling smoke, steam, superheated air, or toxic fumes, often in a poorly ventilated space.

- **First aid management for burns**

✓ Stop The Burning Process. Remove the source of heat if clothing catches fire, Stop, Drop and Rollll to smother the flames.

✓ Remove All Burned Clothing. Clothing may keep in the heat and cause a deeper injury. If clothing sticks to the skin, cool the material or cut or tear around the area to preserve good skin tissue.

✓ Pour Cool Water Over The Burned Area. Keep pouring the cool water for at least 3-5 minutes. Never put ice or cold water on a burn as it lowers body temperature and can make the burn worse.

✓ Remove All Jewelry, Belts, Tight Clothing, Metal, Etc. Remove from burned areas and around the victim's neck – swelling of burned areas occurs immediately.

✓ Cover burns with a soft, clean, dry dressing, bandage or sheet.

✓ Cover victim to keep him/her warm.

✓ Seek medical attention as soon as possible. .

4.2. Procedures of first aid

1. **Evaluate the situation**. Are there things that might put you at risk of harm? Are you or the victim threatened by fire, toxic smoke or gasses, an unstable building, live electrical wires or other dangerous scenario? Do not rush into a situation where you could end up as a victim yourself. If approaching the victim will endanger your life, seek professional help immediately; they have higher levels of training and know how to handle these situations.
2. **Remember you're A, B, Cs**. The A, B, Cs of first aid refer to the three critical things you need to look for.

    ✓ Airway – Does the person have an unobstructed airway?

    ✓ Breathing – Is the person breathing?

- ✓ Circulation – Does the person show a pulse at major pulse points (wrist, carotid artery, and groin)?

3. **Avoid moving the victim**. Avoid moving the victim unless they are in immediate danger. Moving a victim will often make injuries worse, especially in the case of spinal cord injuries.

4. **Call Emergency Services**. Call for help or tell someone else (a specific person, if possible) to call for help as soon as possible. If you are the only person on the scene, try to establish breathing before calling for help, and do not leave the victim alone for an extensive amount of time.

5. **Determine responsiveness**. If a person is unconscious, try to rouse them by gently shaking and speaking to them.

6. **If the person remains unresponsive, carefully roll them onto their back and open his airway**.

   - ✓ Keep head and neck aligned.
   - ✓ Carefully roll them onto their back while holding his head.
   - ✓ Open the airway by lifting the chin.

7. **Look, listen and feel for signs of breathing**. Look for the victim's chest to rise and fall, listen for sounds of breathing (place your ear near the nose and mouth, and feel for breath on your cheek.

   - ✓ If the victim is not breathing, see the section below.
   - ✓ If the victim is breathing, but unconscious, roll them onto their side, keeping the head and neck aligned with the body. This will help drain the mouth and prevent the tongue or vomit from blocking the airway.

8. **Check the victim's circulation**. Look at the victim's color and check their pulse (the carotid artery is a good option; it is located on either side of the neck, below the jawbone). If the victim does not have a pulse, start CPR.

   - ✓ How to Administer Adult CPR (Cardiopulmonary Resuscitation)
   - ✓ How to Do CPR on a Baby

9. **Treat bleeding, shock, and other problems as needed**. After you have established that the victim is breathing and has a pulse, your next priority should be to control any bleeding. Particularly in the case of trauma, you should take steps to control or prevent shock. Click on any of the linked articles for detailed instructions on how to manage a particular problem.

- ✓ ***How to Stop Bleeding*** – Control of bleeding is one of the most important things you can do to save a trauma victim. Use direct pressure on a wound before trying any other method of managing bleeding. Read the linked article for more detailed steps you can take.
- ✓ ***How to Treat Shock*** – Shock, a loss of blood flow to the body, frequently follows physical and occasionally psychological trauma. A person in shock will frequently have cool, clammy skin, be agitated or have an altered mental status, and have pale color to the skin around the face and lips. Untreated, shock can be fatal. Anyone who has suffered a severe injury or life-threatening situation is at risk for shock. Click on the linked article for information on how to treat shock.
- ✓ ***How to Help a Choking Victim*** – Choking can cause death or permanent brain damage within minutes. Read this article for ways to help a choking victim. The article addresses helping both children and adult choking victims.
- ✓ ***How to Treat a Burn*** – Treat first and second degree burns by immersing or flushing with cool water (no ice). Don't use creams, butter or other ointments, and do not pop blisters. Third degree burns should be covered with a damp cloth. Remove clothing and jewelry from the burn, but do not try to remove charred clothing that is stuck to burns.
- ✓ ***Treat a Concussion*** – If the victim has suffered a blow to the head, look for signs of concussion. Common symptoms are: loss of consciousness following the injury, disorientation or memory impairment, vertigo, nausea, and lethargy. Read the linked article for the best ways to treat a concussion.
- ✓ **How to Treat a Spinal Injury Victim** – If you suspect a spinal injury, it is especially critical that you not move the victim's head, neck or back UNLESS THEY ARE IN IMMEDIATE DANGER. You also need to take special care when performing rescue breathing or CPR. Read this article to learn what to do

- ✓ ***How to Treat a Bullet Wound*** – Bullet wounds are serious and unpredictable. Read on for special considerations when treating someone who has suffered a gunshot wound.

10. **Stay with the victim until help arrives**. Try to be a calming presence for the victim until assistance can arrive.

If the victim is not breathing

Follow these steps to restore breathing in an unconscious victim. These steps assume you have already performed the chin lift described above (see image).

1. Check for a clear airway. Remove any obvious blockage.
2. Cover the victim's mouth with your own.
3. Pinch the victim's nose closed.
4. Attempt to fill victim's lungs with two slow breaths. If the breaths are blocked, reposition the airway. Make sure the head is tilted slightly back and the tongue is not obstructing it. Try again.
5. If breaths are still blocked, give 5 quick, forceful abdominal thrusts.

   It includes;

   - ✓ Straddle the victim.
   - ✓ Place a fist just above the belly button and below the breastbone.
   - ✓ Thrust upward to expel air from the lungs.
   - ✓ Sweep the mouth to remove any foreign objects.
   - ✓ Try two slow breaths again.
   - ✓ Repeat until you are successful in clearing the object from the windpipe.

6. With open airway, begin rescue breathing.
   - ✓ Give one breath every 5 seconds.
   - ✓ Check that the chest rises every time.
7. Administer CPR if the victim does not have a pulse.
8. If you don't know how to do CPR then don't try it. wait for the cops

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Self-Check 4- Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. What are the most important steps in external blooding first aid? (5 points)
2. Write the damages related to crush. (5 points)

Note: **Satisfactory rating - 10 points** **Unsatisfactory - below 10 points**

You can ask you teacher for the copy of the correct answers.

Information Sheet 5- Requiring first aid assistance

5.1. Seek assistance from others

If you do find yourself in a situation where the casualty needs urgent first aid or medical attention, the sooner you raise the alarm the sooner help will arrive. Do not leave the casualty. Call for help. Depending on the workplace set-up, you may be able to call for help, or you may have to use an intercom or telephone. Find out your workplace procedures regarding getting help. In most workplaces there will be enough staff working nearby that you can quite easily raise the alarm. You may be able to call out to the person closest to you to either get the first aid kit, the supervisor or any qualified first aider, depending on whom you are working with and where the first aiders are.

5.2. Why you must seek assistance from others.

You cannot always handle the situation all by yourself, seeking assistance from others is a good idea because they can be asked to:

- ✓ Give information about causes of the incident and injury.
- ✓ Provide directions to emergency services to help them get quickly to the scene
- ✓ Contact friends or relatives of the casualty, so they can attend and perhaps provide history about the casualty
- ✓ Help move the casualty and protect the casualty from further injury
- ✓ Communicate with emergency services to provide them with updates
- ✓ Communicate with emergency services to obtain advice
- ✓ Record verbal information you give them – vital signs and condition of casualty
- ✓ Obtain first aid requisites for you including fetching bandages or slings from the first aid room/main office.

If one person refuses to help, ask someone else. Never assume just because one person has refused, everyone will refuse.

Always identify potential helpers as soon as possible when you arrive on the scene.

Ask questions such as:

- ✓ “Does anyone have first aid experience or qualifications?”

- ✓ “Can anyone here help me if I need help?”
- ✓ “Does anyone have a cell phone?”

It is best to have people ready to help and not need to use them than it is to not have identified possible helpers, and then find you do need them. When you have identified helpers, thank them. Ask them to stand where you can communicate readily with them. Then, give them a job – get them to hold something, take notes, control the crowd or provide shade. Obtaining assistance for others must be done in a ‘timely manner’. This means you must do it as soon as you identify a need for help from others. For example, you may be dealing quite competently with a casualty but suddenly find changes in the environment or condition of the casualty. As soon as this is identified, action must be taken to obtain help from others immediately. Do whatever is needed – call out, ask bystanders or use your cell phone to call for help.

Self-Check – 5	Written test

Name…… ID…… Date…….

Directions: Answer all the questions listed below. Examples may be necessary to aid some explanations/answers.

Test I: Short Answer Questions

1. What is the importance of seeking for first aid assistance? (5 points)

Note: **Satisfactory rating - 4 points** **Unsatisfactory - below 4 points**

You can ask you teacher for the copy of the correct answers.

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The Trainer Who Developed TTLM

R/No		Qualification	Educational background	Region	Phone Number	Email-address
1	Deribow Gonfa	A	Plant science	Oromia	0912774688	gonfad24@gmail.com
2	Leta Abebe	B	Plant science	>>	0921768274	letaabebe361@gmail.com
3	Gexenesh Balay	A	Plant Science	>>	0911449053	nebzek2@gmail.com
4	Temirat Tirfessa	B	Plant science	>>	0910891318	tirfessatamirat@gmail.co
5	Seboka Adugna	B	Plant science	>>	0910545516	Adugnaseboka@gmail.com
6	Jemal Furo	B	Plant science	>>	0915647611	jemshusni@gmail.com