TVET CERTIFICATE III

MAINTAINING SHE AT WORKPLACE

CCM 302

Maintain SHE at the workplace

Competence

Credits: 3

Learning hours: 30

Sector: All

Sub-sector:All

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Purpose statement

This module describes the skills, knowledge and attitudes required to respect and apply personal and workplace hygiene. It also covers the personal protective attitudes required in the sector. Moreover, the module describes the skills, knowledge and attitudes required to follow safety and security procedures, identify hazards, assess the associated safety risks and take measures to eliminate or control and minimize the risk. Finally, the trainee learns how to participate in environmentally sustainable work practice.

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LO 1.1: Maintain good health and hygiene.

1.1.1 Importance of maintaining good health

Topic 1: Identification of good health habits

Hygiene' is personal cleanliness and 'sanitation' is public cleanliness. is an important part of leading a healthy lifestyle.Combined with physical activity, your diet can help you to reach and maintain a healthy weight, reduce your risk of chronic diseases (like heart disease and cancer), and promote your overall health.

1.1.2 Habits for good health

For a having good health, I try the following

- I get enough rest.
- I try to eat foods that are nutritious form.
- I avoid smoking and drinking.
- I get plenty of exercise.
- If I do not abstain, I practice safe sex.
- I strive to be clean and keep my surroundings clean.
- I take precautions against malaria.
- I avoid injuries when possible (e.g. Wear helmet when riding moto)
- I treat minor injuries and illnesses promptly.
- I strive to have happy relationships.
- I like to see others do well.
- I avoid thinking about myself in a negative way.
- I strive to look my best.
- I am optimistic about the future.
- I perform a periodic medical check up

1.1.3. Body cleaning products and equipments

- Training room
- Water
- Soaps
- Hand wash Basin
- Hand towels
- Equipped wash room
- Tooth brush
- Personal hair products
- Personal nail clippers
- Comb
- Mirror

- Personal tower
- Personal razor

1.1.4. Body cleanliness practices

- Daily showers or bath and washing hair
- Frequently washing hands and face
- Daily brushing and flossing teeth, regularly after every meal
- Wearing clean clothes and keeping your surroundings clean
- Hold a tissue or hand over the mouth when coughing or sneezing, not a bare hand
- Stopping bad habits such as nose-picking, touching the face etc.
- Washing hands before eating
- Not licking fingers
- Not biting nails
- Washing hands right after you touch your shoes

1.1.5. Workplace dress code and practices

Topic 2: Identification of workplace dressing code

A work dress codeis a set of standards that companies develop to help provide their employees with guidance about what is appropriate to wear to work. Work dress codes range from formal to business, casual to casual.

formal attire requires suits or jackets with dress shirts, dresses, ties, formal leather-like shoes, and, in many companies, hose or socks. Business formal attire is the least flexible dress code.

There are typically four types of corporate dress codes:

- business formal:a business formal environment is a full matching business suit, including a jacket and dress pants or a dress skirt. The darker the suit, the more formal

- business professional:is similar to business formal, but does not necessarily mean you have to break out your best shoes and suit.

- business casual: Business casual attire is less formal than traditional business clothing but still professional enough to be office appropriate. For women, this typically means a skirt or slacks, a button down blouse, and closed-toe shoes

- casual:Casual wear/attire/clothing is a Western dress code category that comprises anything not traditionally appropriate with more formal dress codes: formal wear, semi-formal wear, or informal wear

LO 1.2: Apply hygiene and sanitation practices.

1.2.1. Importance of environmental cleanliness

Topic 1: Identification and application of hygiene and sanitation practices

- **Water and Waste! (Clean Water and Toilet Facilities)**

Poor water and sanitation can lead to intestinal worms and diarrheal diseases such as cholera, dysentery, typhoid and giardia. Here is a story to show how germs are spread from feces:

Read the following true story

One day a man relieved himself in a field behind a house. He had diarrhea. Later a dog sniffed and tasted the ground around the diarrhea. A small boy played with the dog. The boy fell down and began to cry. His mother picked him up. He wiped his dirty hands on her dress. The mother was cooking dinner on the fire. She removed the pot using part of her dress to cover her hands so she wouldn't burn herself. The dirt/feces gets onto her hands. She serves the food to her family. They eat. A few days later they all had diarrhea.

1.2.2. when do we wash our hands?

We must strictly wash our hands:

- Before eating
- Before preparing food
- After using the bathroom
- Before and after treating wounds
- After touching a sick person
- After handling garbage
- After blowing your nose, coughing or sneezing
- Before breastfeeding

1.2.3. proper way of washing hands

Below are the most common steps followed to properly wash our hands

- Wet your hands with running water if possible.
- Apply liquid, bar or powder soap.
- Lather well.
- Rub your hands vigorously for at least 20 seconds (60 second is better according to world health organization). Remember to scrub all surfaces, including the backs of your hands, wrists, between your fingers & under your fingernails.
- Rinse well.
- Dry your hands with a clean or disposable towel or let them air dry.

- If possible, use your towel to turn off the faucet.

1.2.4. Germsbe gone

Topic 2: Prevention of germs

Germs are very small organisms that can grow in the body and cause some infectious diseases; micro-organisms. They can make you sick and are easily transferred. There are, however, some things you can do to help prevent them from getting into your system and making you sick.

Many illnesses and diseases such as diarrhea and intestinal worms are preventable by safe hygiene practices. These practices get rid of the germs that cause the illnesses.

One excellent wayof preventinggerms from getting you or others sick is by washing your hands very often.

1.2.4.1.how to Preventthe spread of germs?

- Wash hands before and after using the toilet and before handling food.
- Use a toilet: If there is no toilet, relieve yourself far from water sources and where it won't come into contact with animals or people. Cover it with dirt to avoid flies.
- Use clean and safe methods of preparing and storing food.
- Keep animals away from food and water sources.
- Protect water sources and use clean water for drinking and washing.
- Cover food. Keep wells and public water places clean. Do not let animals near drinking water, also keep animals out of latrines and homes (possible hygienic contamination, risk of spreading of disease)
- Latrines should be built at least 20 meters or more away from the water source.
- Over time, one can throw lime, dirt or ashes in the hole to reduce the smell and keep flies away.
- Make sure your latrine is covered.

1.2.4.2. Water disinfection methods

- Boil water for at least one minute (3 minutes in mountainous regions) and store in clean containers.
- Use chlorine or a product such as Sur Eau to disinfect water. Follow the instructions on the bottle.

L.o.1.3 prevent food contamination caused by food handlers.

1.3.1 when food handlers can contaminate food?

Topic 1: Prevention of food contamination caused by food handlers

Food handlers can contaminate foot when they:

- Sneeze or cough.
- Have contact with a person who is sick.
- Touch anything that may contaminate their hands and do not wash them.
- Have symptoms such as diarrhea, vomiting, or jaundice—a yellowing of the eyes or skin

1.3.1.1. Washing and cooking food

As important as it is to wash one's hands thoroughly, you also need to wash food off before eating it so that you do not ingest germs through food.

You need to use a clean water source to wash off fruit and vegetables (as well as preferably a type of sanitizer such as Sur Eau if you are going to eat the vegetables raw) before preparing to eat or serve. Also, it is important to cook the food thoroughly to get rid of germs that could be on the food. This is especially important and can get rid of a lot of unseen germs Remember that food grows in manure and you would rather have these germs removed by washing and cooking them out.

1.3.1.2.Washing dishes and storing food

Germs can also be on dirty dishes and cooking pots and pans. So, before and after using the cooking supplies (including utensils) you should wash these with soap and water (preferably hot water when possible).

Also, when you are storing food, try to make sure that it is sealed in a bag (to prevent rodents from getting to it). If you see rat droppings in the food, you should throw it out. Rodents carry many diseases that can make you sick. Additionally, never consume any bread or other food products with visible mold. The food has gone 'bad' at this point and must be thrown out as it could make you sick.

1.3.2 Prevention of food contamination

- Wash your hands
- Wash worktops
- Wash dishcloths
- Use separate chopping boards
- Keep raw meat separate
- Store raw meat on the bottom shelf
- Cook **food** thoroughly
- Keep your fridge below 5ºC

1.3.3. Bandage and cover cuts, burs, sores, and skin infections

Topic 2: Treatment of different simple accidents

- Scratches and Cuts on the Face

Your injury's location can affect how you bandage it. For most injuries, first you'll want to clean it with water to get rid of debris and help prevent infection. Then, stop bleeding by applying pressure with sterile gauze.

- Don't Pop Blisters

Small, unbroken blisters can be left uncovered and will usually heal on their own. The exception if a blister is in an area where it might get rubbed, such as on the sole of the foot. In that case, protect the blister with a soft dressing to cushion the area. For a broken blister that has drained, protect it from infection by covering it with a bandage.

- Wrap Sprains and Strains

A sprain means a stretched or torn ligament, while a strain involves an injury of a muscle or tendon. The signs are pain and swelling. In addition to icing the injury, wrap it with an elastic compression bandage and keep it elevated when possible.

- How to Treat Minor Burns

Seek medical help for burns if they are severe; on the face, hands, feet, or genitals; or bigger than 2 inches. For treating small minor burns at home, rinse the area under running cool water. Never use butter, grease, or powder on a burn. After rinsing, cover the burn with a thin layer of antibiotic ointment. Then bandage it.

- Close Open Cuts

If the edges of a cut are separated but will go together, use a butterfly bandage to close the wound. This type of bandage should be placed across the cut, not along its length. If the wound is long, more than one bandage may be needed.

- How to Cover Scraped Knees or Elbows

Skinned knees or elbows can be awkward to cover. Larger-sized bandages or adhesive bandages with wings can hug joints and move with you. Another alternative: Use a liquid bandage. This will stop minor bleeding and protect the wound from dirt and water. Liquid bandage is shower-resistant and only needs to be applied once

L.O.1.4. Wear work clothing or personal protective equipments (PPE)

Topic 1: personal protective equipment (PPE) identification

Where adequate protection against the risk of accidents or injury to health including exposure to adverse conditions, cannot be encored by other means, suitable PPE and protective clothing having regard to the type of work and risk should be provided and maintained by the employer.

1.4.1. list of common personal protective equipments

Below is a list of most common personal protective equipments

- **Safety helmets**

A **hard hat** is a type of **helmet** predominantly used in workplace environments such as industrial or construction sites to protect the head from injury due to falling objects, impact with other objects, debris, rain, and electric shock.

- **Eye and face protection (eye glasses)**

These are clear or colored goggles, a face shield or other device to protect against dust, flying objects, dangerous substances, harmful heat, light or other radiation and in particular during welding, flame cutting, rock drilling, concrete mixing or other hazardous work.

- **Hearing protection (ear plugs)**

Use appropriate ear muff or ear plugs if you work with or near a noisy machine and make sure they fit properly and are comfortable.

- **Hand protection (gloves)**

Hands are extremely vulnerable to accidents injury and in construction more injuries are caused to hands and wrists than to any other part of the body.

To open wounds, abrasions, fractures, dislocations, strains, amputations and burns occur. They are largely preventable by better manual techniques and equipments and by wearing suitable hand protection such as protective gloves.

- **Foot wears (safety shoes or boots)**

Foot injuries fall into broad types:

1. Those due to penetration of the sole by sharp objects such as nails which have not been knocked down or removed.
2. Those due to crushing by falling materials, which can be minimized by wearing protective foot wear.

1.4.2. proper maintenance of PPE

- Buy fabrics that are durable. If you have a choice, buy fabrics that are naturally durable and require very little care.
- Wash less frequently
- Fold clothes along the seams
- Let everything air out.
- Learn basic repairs.
- Avoid Ironing
- Empty your pockets.
- Close zippers and other fasteners to prevent snagging.

LO 2.1. DESCRIBE REPRODUCTIVE HEALTH.

2.1.1. PUBERTY AND BOY CHANGE

Topic 1: puberty and body change

During puberty you can expect a lot of changes to your body. Your genitals will get bigger. In girls the breasts will grow and your vagina, uterus and fallopian tubes will develop. Hair growing around their genitals, under their arms and on their legs and arms.

Girls skin become more smooth and glistening due to hormonal changes. Kids have usually round face. At puberty it makes changes in shape and becomes square or triangular.

Ensure that they include the following

Male	Female
1.Grows taller and broader. 2.Penis grows bigger. 3.Hair growth on face, 4.underarms, and in pubic area. 5.Grows more muscular. 6.Problems with acne.	1.Grows taller and gains weight. 2.Breasts grow. 3.Growth of underarm hair and in pubic area. 4.Hips grow wider. 5.Problems with acne

2.1.2 Female reproduction

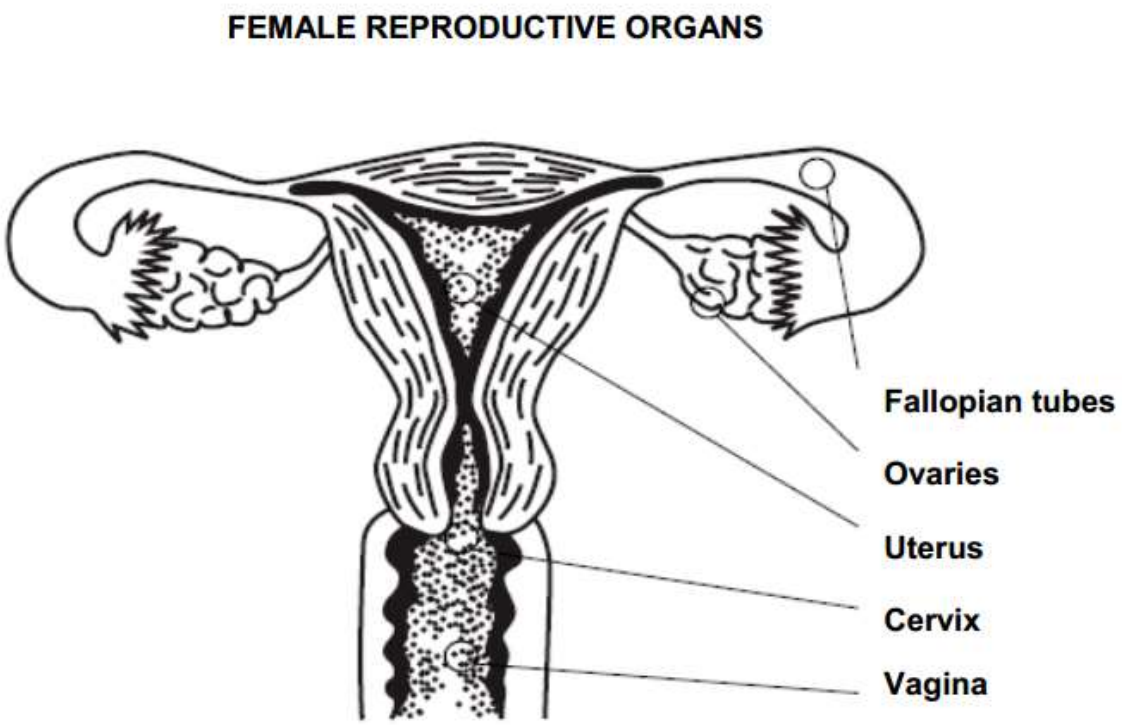
The female reproductive system is made up of the internal and external sex organs that function in reproduction of new offspring. In humans, the female reproductive system is immature at birth and develops to maturity at puberty to be able to produce gametes, and to carry a fetus to full term.

A girl isborn with thousands oftiny eggs in her ovaries. When she reaches puberty, chemicals called hormones are produced which cause the eggs to be mature. About once a month an egg is released from the ovaries and travels down the fallopian tubes towards the uterus. In preparation for the egg the uterus forms a lining of blood and tissue. If it is fertilized by a man's sperm, this is where the baby will grow inside the woman's body. If the woman does not have sex, or uses protection such as condoms the egg cannot be fertilized. In this case the blood lining and the egg will pass out of her body through her vagina during her menstrual period.

This means a girl has her period about once a month. It can take between 2 and 8 days for all the blood to pass out. Sometimes a woman may not menstruate because of stress, or a change in diet. If a woman is pregnant she will not bleed because the blood remains in the body to cushion the fertilized egg.

Girls develop at different times and so they start their periods at different times. Some may start at the age of nine, others not until 19. It will also take a while before the body has a regular pattern.

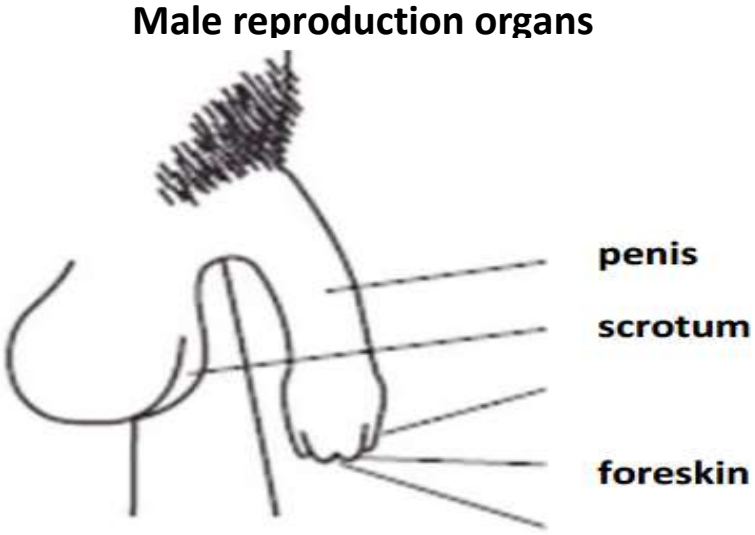
The menstrual cycle continues until the ovaries stop producing eggs. This is called the menopause and normally occurs after the age of forty-five but can be much later.



2.1.3 Describe male reproduction system

The penis is normally limp and soft. However, when the male becomes sexually excited it gets stiff. This is called an erection.Sperm, which is what fertilizes a female egg, is produced in the two testicles which are inside the scrotum sac.

Other fluids are produced in glands inside the male body. The mixture of these liquids is called semen and travel through small tubes inside the body to the penis head.The semen is released through the urethra which is also where urine is released from.



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2.1.4. Pregnancy

Topic 2: Identification of pregnancy and its symptoms

Pregnancy is the term used to describe the period in which a fetus develops inside a woman's womb or uterus

- **signs of pregnancy**

There are several signs, the most common one being missing your monthly bleeding. Also your breasts may feel tender, you may become nauseous, tired and pass urine more often. The best thing to do is take a pregnancy test to confirm if you are pregnant or not.

- **How soon after sex can one have a pregnancy test?**

Pregnancy doesn't happen right after sex. On average, it takes 3 days, but it can take up to 3 days for the sperm and egg to meet and fertilize. Then the egg has to bury itself in the lining of the uterus. The best time to test for pregnancy is after you have missed your monthly bleeding. At this point the pregnancy test will be able to detect a hormone present when pregnant.

2.1.5. Early pregnancy (also known as adolescent pregnancy, is pregnancy in a female under the age of 20)

2.1.5.1. Consequences of early pregnancy

- Family problems: angry parents, girl gets thrown out of the home, sent to live with the grandmother, parents fight because they blame each other for not providing information, etc.

- Education problems: young woman and man get expelled from school, they lose the opportunity to finish education, which means job opportunities are limited.

- Health problems: The growing baby needs a lot of nutrients that will come from the mother. This can make the mother tired and vulnerable to illness if she isn't eating the proper foods. The girl could suffer from headaches, dizziness and tiredness due to a shortage of iron on the blood. The

girl's hips are not as wide as a woman's. She may need an operation to have the baby, which is dangerous for her health

- Financial problems: The girl will find it very difficult to cope with a new baby. It will be an added mouth to feed and she will probably not be able to work at the same time (especially if the father is not contributing). Her job choices are limited because she may have to stop her education.

- Social problems: The girl does not always know how to deal with the problem and fears the reaction of parents, school, etc. She may be ashamed, afraid, confused, and could be marginalized from society.

2.1.5.2. Abortion

An **abortion** is a procedure to end a pregnancy. It uses medicine or surgery to remove the embryo or fetus and placenta from the uterus.

- **Is it legal to get an abortion?**

It is legal only in certain situations such **as rape,** incest and life-threatening health issues.

The Maputo Protocol is an international treaty thatguarantees the right to legal abortion. Under the Protocol, the Rwandan governmentis now required to "protect the reproductive rights of women by authorizing medical abortion in cases of sexual assault, rape, incest, and where the continued pregnancy endangers the mental and physical health of the mother or the life of the mother or the fetus." If you or your partner becomes pregnant, seek the advice of a close relative, friend, or healthcare worker

- **What causes getting pregnant with twins?**

Is having twins hereditary? There are fraternal twins and identical twins. Fraternal twins are formed when 2 eggs are released from the ovaries and they are fertilized by 2 different sperms. Identical twins form when a fertilized egg splits. Research indicates that there is no connection between having identical twins in your family and becoming pregnant with twins. Having fraternal twins on your maternal side, however, increases your chances of having fraternal twins.

- **What is morning sickness?**

Many women experience nausea (sick stomach) during their first 3 – 4 months of pregnancy. It is often referred to as morning sickness but can occur any time. It is widely believed that it is primarily due to the

change in hormone levels in the body. Some women are sensitive to the changes that their bodies go through when they are pregnant, making them more likely to experience morning sickness.

L.O.2.2 Describe transmission, prevention and treatment of HIV/aids and other STI'S.

2.2.1. Definition

Topic 1: Identification, transmission and prevention of HIV/AIDS

- AIDS stands for: Acquired Immune Deficiency Syndrome
- AIDS is caused by HIV, which weakens and finally destroys the body's immune (defense) system.
- It is acquired because AIDS is passed from person to person through various routes.
- Immune-deficiency (lack of defense) refers to the breakdown of the body's ability to fight infections.
- It is called a syndrome because there are a number of different symptoms which are not always found in each case or together.

2.2.2 Transmission

Ways that HIV can be transmitted

- **Blood**: sharing needles; blood transfusion with infected blood; any blood-on-blood contact with infected blood
- **Sex:** unprotected sex; rape (no marks for just 'sex')
- **Mother-to-Child**: conception; childbirth; breastfeeding

What are the symptoms or signs of AIDS?

The symptoms of AIDS are also symptoms of other diseases. These are called opportunistic diseases. They take advantage of the body's weakness. If the body has no defense, it is likely to be affected by a number of illnesses.

Major Symptoms:

- weight loss greater than 10% of body weight over a short period of time
- chronic diarrhea for more than 1 month
- prolonged fever for more than 1 month

Minor Symptoms:

- persistent cough for more than 1 month (for people with TB, this cough would not be
- considered a minor sign of AIDS)
- generalized itching skin rash
- history of herpes zoster in last 2 years
- fungal infections of mouth and/or throat
- chronic progressive or generalized herpes simplex infection

- ☛ generalized enlarged lymph nodes

What is HIV?

HIV stands for: Human Immuno – deficiency Virus

It affects people, not animals so it is 'human'. It stops your immune system from working well, so it is called 'immuno-deficiency'.

It is a virus which is a tiny living thing that you cannot see with the naked eye. You can only see it under a powerful microscope.

Where is HIV in the body?

HIV is only found in human blood and other body fluids such as semen, vaginal fluid, saliva and breast milk.

Where did HIV come from?

No-one knows where HIV came from originally. Many ideas have been put forward but none has been proved right. AIDS is a new disease, which was recognized and reported in 1981 among homosexuals in the US. AIDS is real. It is a serious problem, affecting our families, communities, nations and the world at large.

Can you see when people have HIV?

People who are HIV positive usually look very well for quite a number of years. At first no one can tell that they are HIV positive. But they can still infect other people.

What are antibodies?

The body's defense system (immune system) develops germ fighters, called antibodies, to fight off and destroy various viruses and germs that invade the body. The presence of particular antibodies in a person's blood indicates that the person has been exposed to that infection. For example, when a blood test reveals that the antibodies to HIV are present in the blood, it means that the person is infected with HIV.

What is the 'window' period?

This is the time that the body takes to produce measurable amounts of antibodies after infection. For HIV, this period is usually 2-12 weeks. This means that if an HIV antibody test is taken during the 'window' period, it will be negative since the blood test is looking for antibodies that have not yet developed. During this 'window' period, a person is already HIV- infected and can transmit HIV to others.

2.2.3 Treatment

Can HIV /AIDS be cured?

No. There is no cure for HIV or AIDS although research is being done all the time to find a cure for it.

Can HIV /AIDS be treated?

Yes. There are many treatments which help to fight the effects of AIDS. Some drugs to help to fight the disease are available easily and others are not available or are too expensive

2.2.4 Prevention

What can people with HIV or AIDS do to stay healthy for longer?

Although there is no cure for HIV or AIDS, people who have the virus can do a lot to stay healthy. Some simple rules for a healthy lifestyle are:

- Eat a healthy, balanced diet.
- Get regular exercise
- Have enough rest.
- Be positive about yourself and your situation.
- Spend time with friends and family

2.2.4.1. Window period

The window period is a time of up to 3 months where a person can have the virus but test negative.

Can you pass on HIV to other people in the first 3 months after you contract it

Yes, you can pass on HIV to other people in the first three months after you contract it even if you have a negative test.

Does HIV affect animals too?

HIV does not affect animals. The H in HIV stands for Human. Animals and insects such as mosquitoes cannot pass HIV on.

2.2.4.2. Ways that a person living with HIV can improve their health:

- Having a healthy,
- balanced diet;
- regular exercise;
- plenty of sleep;
- having many friends;
- following doctors' advice;
- treating opportunistic infections,

2.2.4.3. Type of medication that a person living with HIV can take to improve their resistance to illness

ARVs (anti-retroviral)

- **Sexually transmitted infections (STIs),** also referred to as sexually transmitted diseases (STDs), are infections that are commonly spread by sexual activity, especially vaginal intercourse, anal sex and

oral sex. Many times STIs initially do not cause symptoms. Bacterial STIs include c**hlamydia, gonorrhea, and syphilis.**

L.O.2.3 Identify and avoid sexual violence

2.3.1Definition of sexual violence

Topic 1: explanations about sexual violence

Sexual violenceis defined as: any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work.

2.3.1.1. A wide range of sexually violent acts can take place in different circumstances and settings. These include, for example:

- rape within marriage or dating relationships;
- rape by strangers;
- systematic rape during armed conflict;
- Unwanted sexual advances or sexual harassment, including demanding sex in return for favors;
- Sexual abuse of mentally or physically disabled people;
- Sexual abuse of children;
- forced marriage or cohabitation, including the marriage of children;
- Denial of the right to use contraception or to adopt other measures to protect against sexually transmitted diseases;
- forced abortion;
- Violent acts against the sexual integrity of women, including female genital mutilation and obligatory inspections for virginity;
- forced prostitution and trafficking of people for the purpose of sexual exploitation.

2.3.2. Rape

Is unlawful sexual activity and usually sexual intercourse carried out forcibly or under threat of injury against a person's will or with a person

2.3.3. Consequences of sexual violence

- Survivors can face extremely difficult and painful emotions and experiences.
- Every survivor responds to traumatic.
- Unwanted pregnancy

Learning unit 3: Address unsafe situations on the job

L.O 3.1: Identify the primary hazards found in workplaces.

Topic 1: Identification of hazardous areas and removal of hazard at the workplace

Types of hazards in the workplace (safety, chemical, biological, other health hazards)

Physical Hazards	Chemical Hazards	Biological Hazards	Other Health Hazards
1) Hot surfaces 2) Slippery floors 3) Unsafe ladders 4) Machines without protection 5) Sharp knives 6) Hot grease 7) Unsafe electric circuit 8) Lack of fire exits 9) Motor vehicles 10) Cluttered work areas 11) Falling objects	1. Cleaning products 2. Pesticides 3. Solvents 4. protection 5. Acids 6. Mill dust (cassava, millet…) 7. Lead 8. Ozone 9. Machines without protection 10. Wood dust 11. Mercury 12. Poor air quality	**1)** Viruses 2) Bacteria 3) Molds 4) Animals 5) Birds 6) Insects 7) Snakes 8) Poisonous plants 9) Used needles	1. Noise **2.** Vibration 3. Radiation 4. Hot or Cold 5. Repetitive movement 6. Heavy lifting 7. Fast pace of work 8. Harassment 9. Stress 10. Areas too dark or too bright 11. Violence

L.O.3.2. Identify the best ways to address specific problem situations.

3.2.1 Removing Hazardous situations

Topic 1: Identification of method of removing hazards at the workplace

Method 1: Remove the Hazard: The best control measures remove the hazard from the workplace altogether, or keep it isolated (away from workers) so it can't hurt anyone. This way, the workplace itself is safer, and all the responsibility for safety doesn't fall on individual workers. Here are some examples:

- Use safer chemicals, and get rid of hazardous ones
- Store chemicals in locked cabinets away from work areas

- Use machines instead of doing jobs by hand
- Have guards around hot surfaces

Method 2: Improve Work Policies and Procedures

If you can't completely eliminate a hazard or keep it away from workers, good safety policies can reduce your exposure to hazards. Here are some examples:

- Safety training on how to work around hazards
- Regular breaks to avoid fatigue
- Assigning enough people to do the job safely (lifting, etc.)

Method 3: Use Protective Clothing and Equipment

Personal protective equipment is the least effective way to control hazards. However, you should use it if it's all you have. Here are some examples:

- Gloves, steel-toed shoes, hard hats
- Respirators, safety glasses, hearing protectors
- Lab coats or smocks

3.2.2 Dangerous substances in the workplace include

- Acids.
- Caustic (cutting) substances.
- Disinfectants.
- Glues.
- Heavy metals, including mercury, lead, cadmium and aluminium.
- Paint.
- Pesticides.
- Petroleum products

3.2.3 USE OF PPE

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

3.2.4 HEALTH AND SAFETY AT WORKPLACE RWANDAN LAW.

In accordance with the Labor Code, an employer is responsible to maintain health and safety of the workers at workplace. The employer may also create a committee on health and safety at workplace and devise modalities for its functioning. Workers must also be provided with a first aid box, needed in case of emergency

Learning unit 4: Respond appropriately to emergencies at work

L. O.4.1: IDENTIFY EMERGENCIES

4.1.1 Definition of emergency

Topic 1:dealing with emergencies at the workplace

An emergency is a situation that poses an immediate risk to health, life, property, or environment. Most emergencies require urgent intervention to prevent a worsening of the situation, although in some situations, mitigation may not be possible and agencies may only be able to offer palliative care for the aftermath

4.1.2Types of emergencies in a workplace

Emergencies may be natural or manmade and include the following:

- Floods,
- Hurricanes,
- Tornadoes,
- Fires,
- Toxic gas releases,
- Chemical spills,
- Radiological accidents,
- Explosions

L.O.4.2: Emergencies handling

4.2.1 Possible responses to emergencies in the workplace

Resolving an emergency

An emergency response begins with planning, and it doesn't end until a follow-up is complete. Depending on the type of emergency that has taken place, the resolution can take many forms.

In the event that an emergency is a false alarm, your resolution may begin by confirming that all employees are safe. Following real emergencies, you'll want to make sure that injured employees have received medical attention, and make decisions around work stoppage.

Record any steps that taken during the emergency resolution, and make sure to note any details that could help an investigation. If you're using an automated safety system, you should generate a report showing how events transpired.

Resolving an emergency means that you'll have data to work off during your next safety planning

Following the plans and recording your response

As part of planning a coordinated emergency response, you'll want to have a set of instructions available and a way to record a response. When it comes time to respond to an emergency, the response process should be as simple as possible.

Workplace emergencies create a hectic and stressful environment. Recording the response can help to coordinate everyone's effort. If an employee is missing, the recorded response can be given to police or emergency services so that it's clear what steps have been taken.

Safety monitoring services can provide custom instructions, and record responses during emergencies. Recorded responses are not only useful during an emergency, they can be used to create an emergency report. Having all the facts can help to prevent the same emergency from happening again in the future.

Planning for emergencies is only useful if everyone follows the same plans. Keeping a detailed record will also help plan for future emergency scenarios.

L.O. 4.3: Manage safety equipment.

Topic 2: Safety equipment identification and usage

- Fire extinguisher: A fire extinguisher is an active fire protection device used to extinguish or control small fires, often in emergency situations. It is not intended for use on an out-of-control fire, such as one which has reached the ceiling, endangers the user, or otherwise requires the expertise of a fire brigade.

There are four classes of fire extinguishers – A, B, C and D – and each class can put out a different type of fire**.**

Class A extinguishers will put out fires in ordinary combustibles such as wood and paper

Class B extinguishers are for use on flammable liquids like grease, gasoline and oil

Class C extinguishers are suitable for use only on electrically energized fires

Class D extinguishers are designed for use on flammable metals

- Fire horse: are used to detect and distinguish the fire.
- Fire blanket: is a highly flame-resistant blanket that can be used to extinguish a small fire or to wrap around a person in case of a fire. Fire blankets are made from 2 layers of woven glass fiber fabric and an inner layer of fire retardant film. They work by cutting off the oxygen supply to the fire.
- First aid kit: is a collection of supplies and equipment that is used to give medical treatment. The international standard for first aid kits is that they should be identified with the ISO graphical symbol for first aid (from ISO 7010) which is an equal white cross on a green background.

- Fire triangle: Combustion Triangle is a simple model for understanding the necessary ingredients for most fires. The triangle illustrates the three elements a fire needs to ignite: heat, fuel, and an oxidizing agent (usually oxygen)

- Water fire extinguisher: is an extinguisher which is suitable for use on class A solid combustible fires (wood, paper, fabrics, coal) water fire extinguishers penetrate burning materials, creating a cooling effect and prevent reigniting. Our water extinguishers are BAFE approved, fully charged and supplied complete with wall bracket**.**

Using the correct type of extinguisher for the fire, use the four-step PASS technique.

1. Pull: Pull the pin, this will break the tamper seal.
2. Aim: Aim low, pointing the nozzle or hose at the base of the fire. Do not touch the horn on a CO2 extinguisher, it gets very cold and can damage the skin.
3. Squeeze: Squeeze the handle to release the extinguishing agent.
4. Sweep: Sweep from side to side at the base of the fire, the fuel source, until the fire is out.

The **purpose** of using **safety equipment** is to reduce employee exposure to hazards. These hazard risks can be anything from wet floors to falling debris.

Learning unit 5: Ensure environmental sustainability

L.O .5.1: Identify environmental laws, standards and regulations in Rwanda.

Topic 1: Environmental laws and regulations in Rwanda

Environmental sustainability is the rates of renewable resource harvest, pollution creation, and non-renewable resource depletion that can be continued indefinitely. If they cannot be continued indefinitely then they are not sustainable.

5.1.1 Importance of environmental sustainability

Sustainability is important for many reasons including: Environmental Quality – In order to have healthy communities, we need clean air, natural resources, and a nontoxic environment. Healthcare Sustainability and healthcare are intricately related since the quality of our environment affects public health.

It is more of a moral obligation for humans to protect the environment from pollution and other activities that lead to environmental degradation. Importantly, environmental degradation is detrimental since it threatens the long-term health of the animals, humans and plants.

5.1.2 Natural process that takes place in the environment

Natural processes are interactions among plants, animals, and the environment. These interactions, which include photosynthesis, pollination, decomposition, and others, help create and shape natural communities.

5.1.3. Awareness of the interdependence of all species

It is important to understand the interdependence of organisms, specifically living organisms, within an ecosystem in order to obtain a clearer understanding of the succession of biological life and symbiotic relationships. Such relationships are also necessary to understand the importance of preserving wildlife.

5.1.4Law determining themodalities of protection, conservation and promotion of environment in Rwanda

- Constitution of Rwanda

Article 49: Every person has a right to a clean and healthy environment. Every person has

the duty to protect, safeguard and promote the environment. The State shall ensure the

protection of environment.

- Some Key Articles of the Organic Law NO. 04/2005 OF 08/04/2005

Article 2: The environment in Rwanda constitutes a common national heritage. It is also an integral part of universal heritage.

Article 3: Every person has the duty to protect, conserve and promote environment. The State has a responsibility of protecting, conserving and promoting the environment.

Article 7: Five principles of Conservation and rational use of environment and natural resources.

Those principles are:

- Protection
- Sustainability of environment and equal opportunities among generations
- Polluter pays
- Information dissemination and community sensitization in conservation and
- protection of the environment

☛ Cooperation

Article 64: The population has the obligation to conserve the environment by individualaction or through collective activities, associations of the environment, in preparing greenspaces and reserved areas and other activities that promote environment.Article 67: Every project shall be subjected to environmental impact assessment (EIA),before obtaining authorization for its Implementation.

Article 85: “an agricultural activity shall respect a distance of ten (10) meters from riversand fifty (50) meters away from the banks of lakes…”

☛ Laws and ministerial orders

Laws and ministerial orders related to land and wetlands exploitation:

Article 19 (Law n° 43/2013 of 16/06/2013): Swamp land belongs to the State. It shall not definitively be allocated to individuals and no person can use the ground of holding it for a long time to justify the definitive takeover of the land.

Article 2 (Ministerial order n°007/16.01 of 15/07/2010): The land within a distance of fifty (50) meters from the lakeshore is public property.

Article 3 (Ministerial order n°007/16.01 of 15/07/2010): The land within a distance of ten (10) and five (5) meters from the shore of bigrivers and small rivers respectively is publicproperty.

Ministerial orders about banned products in Rwanda:

Law n° 57/2008 of 10/09/2008relating to the prohibition of manufacturing,

importation, use and sale of polythene (plastic) bags in Rwanda

Prime minister order n°27/03 of 23/10/2008determining a list of prohibited drugs

unless authorized or temporary permitted

Prime minister's order n° 26/03 of 23/10/2008determining the list of chemicals and

other prohibited pollutants

Ministerial Order Nº 006/2008 of 15/08/2008regulating importation and

exportation of ozone depleting substances, products and equipment containing such

substances.

5.1.5 Law relating to the prohibition of manufacturing, importation, use and sale of polythene bags in Rwanda

LAW N°57/2008 OF 10/09/2008 RELATING TO THE PROHIBITION OF MANUFACTURING, IMPORTATION, USE AND SALE OF POLYTHENE BAGS IN RWANDA

Article One : Purpose of this Law

This Law prohibits the manufacturing, usage, importation and sale of polythene bags in Rwanda.

Article 2: Definition of the term "polythene bags"

In this Law, a **"poythene bag"** is a synthetic industrial product with a low density composed of numerous chemical molecules ethene with a chemical formula; (CH_2=CH_2). In most cases the bag is used in packaging of various

L.O. 5.2: identify the best practices to keep the environment clean.

5.2.1 Types of waste:

Topic 1: waste management

- 1.**Non-hazardous waste**:is any type of industrial waste which, according to regulations, cannot be added to a dumpster or sewage line. Examples of non-hazardous wastes would be sugars, lactic acid, bromides, or carbonates, just to name a few.

- 2.**Hazardous waste**:is waste that has substantial or potential threats to public health or the environment. Characteristic hazardous wastes are materials that are known or tested to exhibit one or more of the following hazardous traits: Ignitability. Reactivity.

5.2.2 Types of pollutions and pollutants

- Encroachment for agriculture and settlement
- Unsustainable agriculture
- Soil erosion
- Excessive use of pesticides and fertilizers
- River bank cultivation;
- Soil erosion due to poor farming practices
- Uncontrolled forest and grassland burning
- Over-grazing
- Use of plastic bags
- Deforestation
- Unsustainable mining and quarry activities
- Release of pollutants into soil by industrial activities
- Improper disposal of wastes
- Unplanned settlement and urbanization without wastes or wastewater management systems
- Charcoal burning

Water-Related Pollution:

- Release of pollutant into water by industrial activities
- Improper disposal of wastes
- Unplanned settlement and urbanization without wastes or wastewater management systems

Air-Related Pollution:

- Release of pollutants into atmosphere by transport and industrial activities
- Open burning of wastes, wetlands and forests;
- Dust, vibrations, noise, radiation, heat,

5.2.4 Best practices

- **Waste collection:** is a part of the process of waste management. It is the transfer of solid waste from the point of use and disposal to the point of treatment or landfill.

- **Reuse of waste:** means any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.

Biodegradable waste : A biodegradable material can be defined as a material which can be decomposed by b bacteria or other natural organisms and not be adding to pollution.

- **Non-biodegradable waste:** A Non-Biodegradable material can be defined as a kind of substance which cannot be broken down by natural organisms and acts as a source of pollution.

L.O 5.3: describe climate change adaptation and mitigation measures.

5.3.1 Rain water harvesting

Topic 1: Description of climate change and mitigation measures

Rainwater harvesting is the accumulation and storage of rainwater for reuse on-site, rather than allowing it to run off.

Rainwater harvesting is a sustainable process that helps in preserving rain water for different purposes and for the future needs as well. Rainwater Harvesting is a method of collecting and storing rain water to be used for various purposes while it can be used in future as well.

5.3.2Soil erosion control

The four most common soil erosion prevention methods are **vegetation,geotextiles, mulch,**and **retaining walls**. Preventing soil erosion is critical in protecting your property and exposed soil, whether from wind, weather, running water, and even the after-effects of forest fire

- **Vegetation:** iS defined as growing plants, or a life without physical, mental or social activity.

- **Geotextile :** are permeable fabrics which, when used in association with soil, have the ability to separate, filter, reinforce, protect, or drain.

- **Mulch :** is a layer of material applied to the surface of soil. Reasons for applying mulch include conservation of soil moisture, improving fertility and health of the soil, reducing weed growth and enhancing the visual appeal of the area.

- **Retaining walls:** Retaining walls are relatively rigid walls used for supporting soil laterally so that it can be retained at different levels on the two sides. Retaining walls are structures designed to restrain soil to a slope that it would not naturally keep to (typically a steep, near-vertical or vertical slope).

5.3.3 Afforestation and reforestation

difference between afforestation and reforestation?

Afforestation is the process of establishing forests in areas that have never been forested while **reforestation** is the restoration of forests in areas where forests were removed or destroyed. ... Reforestation and afforestation can be used to improve the quality of air.

5.3.4 Alternative energy use

Alternative energy is any energy source that is an alternative to fossil fuel. Marine energy, hydroelectric, wind, geothermal and solar power are all alternative sources of energy. The nature of what constitutes an alternative energy source has changed considerably over time, as have controversies regarding energy use.

Use of Alternative Energy Sources

- Solar Power. When most people think of alternative energy sources they tend to use solar power as an example.
- Nuclear Power.
- Hydroelectric Energy.
- Wave Energy.
- Biofuels.
- Natural Gas.
- Geothermal Power.
- Wind Energy

5.3.5 Greening and beautification

Beautification plays an important role in protecting a cleaned site from being trashed again.

Planting trees is one of the best and easiest ways everyone can help the environment. In addition to being beautiful, trees provide a wide range of social, community, economic, and environmental benefits.

5.3.6 Impact of climate change

Climate change describes a change in the average conditions such as temperature and rainfall in a region over a long period of time.

5.6.3.1. causes of climate change

The primary cause of climate change is the burning of fossil fuels, such as oil and coal, which emits greenhouse gases into the atmosphereprimarily carbon dioxide. Other human activities, such as agriculture and deforestation, also contribute to the proliferation of greenhouse gases that cause climate change.

5.3.7. Fighting against climate change

- Mitigation (reducing climate change) :involves reducing the flow of heat-trapping greenhouse gases into the atmosphere, either by reducing sources of these gases (for example, the burning of fossil fuels for electricity, heat or transport) or enhancing the “sinks” that accumulate and store these gases (such as the oceans, forests and soil).

  The goal of mitigation is to avoid significant human interference with the climate system, and “stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner

- Adaptation: adapting to life in a changing climate involves adjusting to actual or expected future climate. The goal is to reduce our vulnerability to the harmful effects of climate change (like sea-level encroachment, more intense extreme weather events or food insecurity). It also encompasses making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons or increased yields in some regions).

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