PUBLIC UTILITIES COMMISSION OF SRI LANKA

ELECTRICAL SAFETY GUIDELINE FOR SCHOOLS
# Electrical safety guideline for schools

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1.0 Purpose:

To ensure the safety of all students, staff, employees and contractors who use electrical equipment and appliances or who may be exposed to electrical hazards. This guideline covers the requirements associated with electrical safety, maintenance of electrical equipment, identify defective electrical equipment and prevent accidents due to electricity.

2.0 Scope:

This guideline applies to all students, all staff, visitors and contractors and to all work places associated with the school.

3.0 Definitions:

For the purpose of this guideline, following definitions applies:

- **Competent person** – A person who has necessary theoretical knowledge and practical skills gained through qualification and training in the relevant field and experience to undertake the task prescribed by this guideline.
- **Electrical installations** – A system that supplies electricity to the buildings, including the switchboards, distribution boards, fixed wiring and socket outlets.
- **Electrical appliances** – A device/apparatus connected to the electrical power supply
- **Extension cords/leads** – An assembly of plug intended for connection to a main outlet socket, sheath flexible cords and cord extension sockets.
- **Fixed equipment** - Equipment that is fasten to a support, secured in position located in a specific location
- **General purpose outlets** – Three pin wall socket outlet (used for 230 V)
- **Personnel equipment** – Any privately owned equipment of plug-in type, which used in schools; examples: radios, mobile phone charges, computers etc.
- **Portable appliance testers** – Is an electronic instrument that tests the equipment automatically. No technical interpretation required.
- **Residual Current Device (RCD)** – Is an electro-mechanical switching device intended to isolate the power supply when there is a current imbalance at rated leakage current value of the device.
• *Power Distribution Board (Fixed in the Installation)*-An Assembly containing switches or Protective devices(fuses, Main Breaker, circuit breakers, RCD etc) associated with one or more outgoing circuits but fed through the Breaker and the RCD which are capable to handle fault level associated in the location.

• *Extension board* – A device having a single plug intended for connection main outlet socket, sheath flexible cord and an assembly of one or more outlet sockets.

• *Risk management* – The culture, processes and structures that are directed towards realizing potential opportunities whilst managing adverse effects.

• **BS**-British Standard

• **IEE**-Institute of Electrical Engineers

**4.0 Responsibilities / Obligations:**

**4.1 Principal**

• Responsible for general and electrical safety in their own respective areas such as class rooms, laboratories, **Aesthetic rooms**, workshops, IT learning centers, **Home science laboratories**, libraries, officers, staff rooms, canteens, sport rooms, pavilions, swimming pools, shrine rooms, hostels etc.

• This includes testing and tagging of relevant appliances & equipment and testing of extension cords and multiple-socket outlets. Ensure implementation of electrical safety guideline by appointing of **competent testing** personnel.

• Any damaged equipment should be repaired and or replaced with the help of competent persons.

• Ensure that the testing of equipment and installations periodically and tagging & keep records for inspection. Ensure that any faulty equipment is dealt with an appropriate manner.

• Inter building wiring connection should be fasten properly and frequent observation should be done in case where animals (monkeys etc.) use such path to move around.

• Ensure not to install antenna( Television, Radio etc) close to power lines (distance from the erecting point to the power line always more than the height of the antenna structure and the allowed clearance given in the 6.1)

• Ensure not to allow crossing of high voltage (HV) line, low voltage (LV) distribution wires, stay wires and setting up of earthing system within the schoolyards. **Until such lines are cleared cradle should be fixed**

• Ensure that the testing of equipment and installations should be done periodically and tag & keep records for inspection.
4.2 Class Teacher/Sectional head

- Visually inspect all wirings in the class room and around
- Visually inspect all electrical appliances/equipment and cords before use.
- Visually inspect all earthing leads are properly earthed. Each building should have the proper earthing system.
- **Do not use two pin appliances without having RCD.** RCD should be checked before using suspected or risk prone appliances
- RCD should be checked –see annexure 2
- **Do not use two pin appliances unless they are Class II type (Double insulated)**
- Remove any appliances/equipment with frayed cords, missing ground prongs, cracked tool casings, etc. from service
- **Attached** warning tags to any defective appliances/tools and remove. Do not use them until it has been properly repaired
- Avoid the use of appliances/equipment under wet conditions which influences the conductive properties
- Electrical cords/leads must be protected from damage, including damage by liquids(acid, Alkaline, salt water, rain water etc.) Always **inspect** the cords for any damage before use.
- Any exposed live wires should be **properly** insulated; by a competent person.
- Double adaptors and piggy back plugs must not be used
- Any electrical hazards, incidents or damages **to the** electrical equipment should be brought to the notice of Principal
- Ensure that the testing of equipment and installations periodically and tagging & keep records for inspection.
- Ensure that any faulty equipment is dealt with an appropriate manner and better to be repaired through the competent person.
- All the **exposed** wire/cable joints should be insulated using proper insulation tapes.
- In the case of inspection, ensure to get the approval from the principal and the list of areas to be inspected should be given to the Principal before commencing any inspection or any alteration to the Electrical Installation in the school by a competent person. Circuit diagrams relevant to the alteration should be given to the principal.

4.3 Students

- Always use electricity under the supervision of Class teacher/Sectional Head.
- Do not touch any unsecured wires, cables, connectors, appliances or equipment specially in wet areas
- Do not use two pin appliances without having RCD. RCD should be checked before use of suspected or risk prone appliances. See annexure 02.
- Do not use two pin appliances unless they are Class II type (Double insulated)
- Any lapses being noted; should be informed to Class teacher or sectional Head.

4.4 Contractors/service providers
- Proper authority should be taken from the Principal/Sectional head/ Class teacher before commence of any repair works. Such work should be under taken by competent approved contractors and should be carried out after ensuring the safety of students.
- Any amendment/changes to the installation should be informed to the principal in writing together with the drawings.

4.5 All users of Electrical appliances / Equipment / Apparatus
- Do not use damaged cords, connectors etc. where insulation has been failed.
- Covers and protecting guards are in position & secured
- Ensure the apparatus and the hands are dry and clean
- Do not pull-out a plug from a socket by pulling the cable/cord
- Always switch off the power before pulling out a plug from a socket
- Check whether the RCD are installed and working properly.
- Get the RCD checked for proper installation and check the operation (timing, capacity/rating & tripping value etc) by a competent person.

4.6 Supporting staff and security personnel
- Visually inspect all appliances/equipment and wirings in the class rooms and around
- Visually inspect all electrical appliances/equipment before use
- Remove any appliances/equipment with frayed cords, missing ground prongs, cracked tool casings, etc. from service
- Attach warning tags to any defective appliances/tools and do not use them until it has been repaired by a competent person.
- Avoid use of appliances/equipment under wet conditions which may influences the conductive properties
- Electrical cords/leads must be protected from damage, including damage by liquids/chemicals
- Any exposed live wires, cables etc. should be insulated by a competent person.
- Double adaptors and piggy back plugs must not be used
- Any electrical hazards, incidents or damages to the electrical equipment should be reported to the Principal
• Ensure that a list of areas to be inspected is provided to the Principal

4.7 Responsibility on Record Keeping

Please see annexure 01 for details

5.0 Management of Electrical Accidents/Hazard

• Electrical accidents are caused by a combination of following factors:
  1. Electrical Installation systems without having a proper protection system
  2. Unsafe Appliances/equipment and/or installation
  3. School premises made unsafe by the environment
  4. Unsafe practices

N.B.

Avoiding above mentioned lapses and installation of appropriate Residual Current Devices (RCD’s sensitivity with 20mA or 30mA,) to provide automatic disconnection of supply in the event of an earth fault (leakage of current to the ground) in an installation or any leakage current to the ground through the connected appliance/equipment whereby it could prevent electrical hazard or any electricution.

5.1 General safety precautions

• All the electrical installations in buildings should be in accordance with BS 7671 (2008), Requirement for Electrical Installations is IEE Wiring Regulations. 17th Edition or the latest. Inspection certificate should be issued by a Chartered Electrical Engineer that the installation wiring has been done in compliance to the above mentioned standard.

5.2 Requirement of special protection system for Appliances/Equipment and from lightning

• The installation of appropriate Residual Current Devices (RCDs) is to provide automatic disconnection of supply in the event of a fault in an installation or in a connected electrical appliance/equipment.
• Installation of proper MCCB to the relevant Sub Circuit could protect from over loading or from short-circuiting the circuit.
• **Proper Earthing system should be available for each building.**
• Install Lightning protection system for the building and its Earthing lead should be buried at least 3meters away from the installation Earthing lead.

5.3 Testing Intervals for Residual Current Devices (RCD)
This is a special protection device and to be used in workshops, laboratory, construction sites and other outdoor areas as it gives protection against shock or electrocution. Selection of the RCD should be in accordance with IEE Regulation, to avoid unnecessary tripping and safe operation. Please refer annexure 02 for details.

5.4 Electrical Fire and Safety

Fire fighting equipment should be available and it should be marked for the type of fire.

Type of fire :-
A-sold(wood, paper plastics etc.),
B-liquid (Oil, Petrol or spirit type liquids, paint etc.),
C-Gases(LP Gas, Accetiline etc)
D-Metal(Aluminium, Lend, etc)
Electricity.

Fire due to Electricity

Operating instruction should be available with the fire fighting extinguishers. It is recommended to use Powder Type fire extinguisher for open fire due to electricity. However, for the restricted cubicle /enclosed environment use CO₂ fire extinguisher. Do not use water or water base extinguishers such as Foam etc. Foam fire extinguishers should be use for fire due to oil/diesel, petrol, kerosene etc. Don’t use water. Otherwise use sand to cover fire

- Do not meddle with grounded (fallen) power line but switch off the power from the main switch and sub circuit switches and inform the electricity authority. But in extremely emergency condition, use tested and approved Rubber Gloves after switching off the power and ascertain that there is no power in the line.
- Avoid Transmission high voltage (HV) network, towers, substations and their earthing system within the school premises. If it is available, it should be separated out from the fence and it should be beyond 3 meters.

5.5 Access to electrical switch boards

- Approaching way to the main switch boards and other sub switch boards should be kept free from any obstructions to enable for quick access to knock off the supply in case of an emergency.
- Keep the insulated mat before the switch boards/switches where operator stands for operation

5.6 Extension Boards and use of Extension Cords
• Unsolicited connection (flexible wiring) should not be taken from the power boards.
• Extension type cords that are not 3-wire type, not designed for hard usage, or that have been modified, should not be used
• Use only factory-assembled cord assembly.
• Use only cords, connection devices, and fittings that are equipped with strain relief mechanism.
• Remove plug top by pulling the plug, but not by cord
• Do not use flexible cords that have been damaged or with the un-acceptable modification.
• All socket outlets installed on extension cords should be incorporate with shutters.
• Avoid use of extension leads along walkways and corridors
• Power Boards used in the school should comply the IEE Regulation
• Power Boards should have the minimum protection features such as ,Current overload protection with the reset device
• Individual switch should be available for the Power board where their leads are more than 1.8 meters
• Power boards must be in safe location where it does not get damage due to external body .Otherwise it should be securely mounted on work bench or floor where there is no external impact on the board
• Power boards should not be over loaded (i.e. piggy back one board onto another )
• Piggy- back plugs and double adaptor should not be used as it cause high risk on safety
• Before use Power board extension leads should be checked (inspect and test) for any damage and should not cover by mats ,across corridors or other trafficable areas
• Extension cords, which are in tight coil, may overheat and catch fire
• Check all electrical plugs to make sure they fit snugly into their outlets. Plugs that are loose or that wobble in the outlet are potential fire hazards and should be repaired or otherwise remove from the service. Discolored and heated outlets, plug tops should be checked by a competent person to find out the reason and rectify or replace depend on the situation.
• Use only 12 Volts power supply for soldering iron/bouth

5.7 Testing & Tagging of new and old appliances/equipment

• Testing & Tagging of electrical equipment are required only for the works in work shops, construction sites or uses in hostile operating condition. Please refer annexure 02 for details

• Old and new appliances/equipment, extension cords and multiple-socket outlets should be tested by a competent person
• Any damage appliances/equipment should be repaired or replaced if beyond repairs with the help of a competent person
• Ensure that the testing of appliances/equipment and installations periodically and tagging &
keep records for inspection.
• Tagging - After testing for use, it should be tagged with a durable and legible label and
attached as close as practical to the plug end of the lead indicating:
  - Test Date:
  2. Next due date for test
  3. Identification barcode
  4. Tested By:

• Ensure that any faulty equipment is removed from the service until it repaired for safe
operation
5.8 Electrical safety inspection check list

All the outlets and switches should be checked before starting the school for the year
and for details, please refer annexure 04

5.9 Safe use of appliances/equipment
• Visually inspect all the switches, plug bases, lamp fittings, fan regulators, fans etc.
connected to the system are free from external damage/component defects in the
accessories to ensure the safety
• Check whether the RCD is installed and working properly.
• Check that flexible cords are effectively anchored.
• Check that the inner cores of the flexible supply cords are not exposed or twisted
• Check that the external sheaths are not cut, abraded, twisted or damaged to such extent
that the insulation is visible
• Check covers and guards are in place and secured as required by
manufacturer/supplier
• Visually inspect all electrical appliances/equipment for any damage before use
• Remove any appliances/equipment with frayed cords, missing ground prongs, cracked
tool casings etc. from service
• Switch off any appliances/equipment as well as plug base switch (if available) before
plugging to electrical supply
• Check whether the power supply earthing system is properly grounded
• Check whether the electrical appliances/equipment earthing arrangement is properly
secured
• In case of two wire system where there is no earthing conductor for the
appliances/equipment should not be connected unless having the RCD protection
• Do not remove ground pins/prongs from cord and plug connected
appliances/equipment or extension cords
• Use double – insulated tools for live line repairs
• Ground all exposed metal parts of appliances/equipment through proper arrangement (through properly grounded plug bases)
• Use insulated ladders (fiberglass) and other tools when deals with electricity or use at least ladders of having insulated rubber caps at resting ends

**Do not use an electrical appliances/equipment for other purposes than it has been designed, whereby no longer ensure the safety features built in by the manufacture**

• Do not use appliances/equipment meant to use indoor locations for out door works
• Do not use cords or tools with worn insulation or exposed wires
• Use extreme caution when working with electricity where there is water in the environment or on the skin
• Use standard pins to tap the supply from the power source
• Always switch off the power supply in case of replacement of bulbs and any apparatus
• Heavy load appliances (Refrigerators, Mixers, Iron, wet Grinders, washing machines, UPS etc with three pin plug top should be used.) must be properly earth through the installation earthing system.
• Do not allow to hang advertisement boards or any other on the power carrying poles
• Ensure to get any wiring done only by competent persons.
• Do not allow vehicle to be loaded above the height of power line within the premises
• Portable Generator should not be connected to internal wiring installation without the advice of competent person for safety reasons
• Hot water geyser should be installed by competent person for safety reasons.

**Do not use electrical extension cords or appliances near the pool without earth leakage protection system.(connected circuit should have RCD).**

• Do not use electric heaters in the bathroom unless they are specially design for bathroom.
• Do not touch anything connected with electricity with wet hands or use of electrical appliances in wet places or near water, such as drier near a bath or basin containing water
• Avoid erecting flag mask/antennas near the power lines within the school premises. Otherwise, distance from the erecting point should be more than the height of the mask/pole.

**5.10 Appliances /Equipment working under hostile operating environment**

• Use of Appliances /Equipment should not be encouraged under hostile environment since there is no such requirement arises in schools

**5.11 Rectification of Un-solicited tapings and extensions**

• Proper authority should be taken from the Principal/Sectional Head before do any


5.12 Risk assessment for existing appliances/equipment

- Risk assessment should not be encouraged as the necessity of using such appliances/equipment is not very essential in schools.

5.13 Maintenance and record keeping

- Test and tag of relevant appliances/equipment, extension cords and multiple-socket outlets and keep relevant records for inspection and maintenance activities should be recorded and for details please refer annexure 05.

Any damaged appliances/equipment should be repaired or replaced if it beyond repairs with the help of a competent person. Maintain a register for damage/failed equipment. For details, please refer annexure 06.

5.14 Practices to be followed by Maintenance staff

- Maintenance group should be headed with a competent work supervisor and he should take necessary permits and ensure to follow the electrical regulations, safety of staff and the equipment.

- Arrange such works during after school hours, weekends or school holydays.

- Get the “permit to work” indicating the work to be attended together with the names of competent persons (approved competent personal).

- Switch of the Main switch and take off fuses, switch off MCBs and earth the system.

- Put up the Sign Board indicating that the “Men at Working.”
After completing the work all the workers who attend the work should acknowledge in writing that the system is no longer safe to work, remove earth from live parts and normalize the system by the work supervisor.

6.0 Safety & First Aide

6.1 Safety

Clearance requirement for the Distribution Low Voltage Power Line (230 Volts to Ground) is as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Clearance in Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossing of Public Road</td>
<td>5.5</td>
</tr>
<tr>
<td>Other than crossing of Public Road</td>
<td>5.2</td>
</tr>
<tr>
<td>Places where vehicle is not accessible</td>
<td>4.9</td>
</tr>
<tr>
<td>Service wire (insulated) to Buildings or between Buildings where vehicle is accessible</td>
<td>3.7</td>
</tr>
<tr>
<td>Service wire (Insulated) to Buildings or between Buildings where vehicle is un accessible</td>
<td>2.7</td>
</tr>
<tr>
<td>Above the building (avoid this situation in the school bldgs.) - Vertical clearance</td>
<td>2.7</td>
</tr>
<tr>
<td>Near the building - horizontal Clearance</td>
<td>1.5</td>
</tr>
<tr>
<td>Erection location of any Post/Mast/Antenna (TV, Radio etc)</td>
<td>Always, distance from the erected point of the Post/Mast to the power line, should be more than the height of the post or a Mast</td>
</tr>
</tbody>
</table>

NB - All the High voltage lines (More than 230 volts to ground) should not be allowed to crosses the School premises (Buildings or Play Grounds etc.)

6.2 First Aide

- Procedure to follow in case of an accident/shock due to Electricity

- While seeking assistance, immediately switch off the power and if it is not possible, try to remove the patient from the power supply in most appropriate safe manner (rescue person should use appropriate gloves or at least dry paper/dry wooden plank/dry pages of a book/dry cloths etc. as a insulator in order to avoid contacting with the electrical supply through the affected person). It is also keep in mind
that only one person should be in command in the rescue operation and always use the right hand.

After rescue the patient shake his shoulders gently and speak him to test whether he is conscious or unconscious (Figure 01)

- Casualty does not show any response place the finger tips of on the casualty’s forehead and the chin and back his head to open the air way. (Figure 02)

- Check the breathing for 10 seconds. Respiratory process can confirm by look, listen, feel. (Figure 03).

- If the casualty is breathing, treat the casualty as an unconscious person and place him recovery position.

**Step-1**
Step-2

If the casualty is not breathing, place the heel of your first hand on top of the other hand, and interlock your fingers. Leaning well over the casualty, with your arms straight, press down vertically on the breastbone and depress the chest by about 4-5 cm (1 ½ in.). Release the pressure without removing your hands from his chest. Compress the chest 30 times at a rate of 100 compressions per minutes. The time taken for compression and release should be about the same.
• Tilt the head back, lift the chin, and take a deep breath to fill your lungs with air and place your lips around the casualty’s mouth, making sure you have a good seal. Blow steadily in to the casualty’ mouth until the chest rises. give two rescue breaths .

• Continue this cycle of alternating 30 chest compressions with two rescue breaths.

**FIRST AID FOR BURNS**

i. Keep him away from fire and smoke
ii. Drench Burnt area immediately with cold running water
iii. Cover with him thick clothes
iv. Give fluids if patient is able to swallow
v. Never give alcohol to the patient
vi. Direct patient to correct treatments

**Action to be taken at Emergency of Fire, Explosion etc.**

i. Make all people known.(by operating the emergency alarm)
ii. Stop the work engaged.
iii. Do not be panic
iv. Switch off the electricity supply if availability of electricity is dangerous.
v. Assemble at the safety place known previously
vi. Make sure all have come safely.
vii. Use only dry powder & Co2 fire extinguishers for electrical fires.

**7.0 Accident reporting**

**7.1 Legal requirement**

• Inform all fatal accidents due to electric shocks to the nearest Police Station of the area and relevant electrical supply authority
- Inform to Chief Factory Inspecting Engineer, Department of labour as per Factories Ordinance
- Necessary to fill the relevant forms and forwarded to the doctor who is attending the patient
- Inform to the Commissioner for Workmen Compensation as applicable.

7.2 Institutional requirement

- Anybody who suffered from a electric shock seek immediate first aid and medical attention as it may cause delayed effects
- Inform all fatal and major accidents due to electric shocks to the Zonal education office and keep the record
- Get the installation, outlets and appliances are checked by competent person. Any equipment caused the accident should be checked before re-use
- Appropriate corrective action has to be taken to prevent such incident in future
- To hold the preliminary enquiry and forward to the Zonal education office for the formal enquiry
- If there is a severe damage or Fatal, accident has to be informed to the Labor Department

7.3 Report/record keeping of accidents

- All the reports & records in connection with the accident should be maintained under the custody of the Principal

7.4 Compensation

- Arrangements should be made to pay the compensation (if applicable) to the affected party based on prevailing Law in the country.
Annexure 01

Responsibility on Record Keeping

<table>
<thead>
<tr>
<th>Record</th>
<th>Responsibility</th>
<th>Location</th>
<th>Media</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record of Test &amp; Tag</td>
<td>School Principal</td>
<td>office</td>
<td>Hard copy</td>
<td>7 Years</td>
</tr>
<tr>
<td>Record of faulty equipment</td>
<td>School Principal</td>
<td>office</td>
<td>Hard copy</td>
<td>7 Years</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Annexure 02

Testing Intervals for Residual Current Devices (RCD)

This is a special protection device and to be used in workshops, laboratory, construction sites and other outdoor areas as it gives protection for electrocution. Selection of the RCD should be in accordance with IEE Regulation, to avoid unnecessary tripping and safe operation.

<table>
<thead>
<tr>
<th>Type appliances and Environment</th>
<th>Push Button Test by user</th>
<th>Operating Time RCD tester</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Portable</td>
<td>Fixed</td>
</tr>
<tr>
<td>Workshops &amp; repair places</td>
<td>Daily or before use which ever is longer</td>
<td>6 months</td>
</tr>
<tr>
<td>Healthcare, Educational units &amp; Laboratories</td>
<td>3 months or before every use which ever is longer</td>
<td>6 months</td>
</tr>
<tr>
<td>Office Environment</td>
<td>3 months</td>
<td>6 months</td>
</tr>
<tr>
<td>Hired Equipment/outside</td>
<td>Prior to use</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Repaired/serviced equipment</td>
<td>Before use</td>
<td>Before use</td>
</tr>
<tr>
<td>Accommodation houses/Quarters</td>
<td>6 months</td>
<td>6 months</td>
</tr>
<tr>
<td>Concert Room/Theatre environment</td>
<td>6 months</td>
<td>6 months</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
</tbody>
</table>

Note:-
Portable RCD should be used in following situations
  1. Based on Risk assessment
  2. Suspected power supplies where hard-wired RCD have not been provided.
  3. In hostile or unusual environment

**Annexure 03**

Testing & tagging of new and old appliances/equipment

Testing & Tagging of electrical equipment are required only for the works in work shops, construction sites or used in hostile operating environment. As a guide example of equipment required for testing and tagging are:

<table>
<thead>
<tr>
<th>Nature of Equipment</th>
<th>Example</th>
</tr>
</thead>
</table>
| Hand held equipment | Hand held power tools  
                      | Hairdryers  
                      | Kitchen appliances  
                      | Laboratory equipment |
| Portable equipment  | Floor polishers  
                      | Vacuum cleaners  
                      | Portable lighting equipment  
                      | Pedestal Fans  
                      | Heaters |
| Electrical equipments that is moved between operation in such a manner that could damage the flexible supply lead( Portable equipment with cabling system) | Overhead projectors  
                                                                 | Laptop computers  
                                                                 | Welding equipment/Machine  
                                                                 | Extension cords  
                                                                 | Power boards  
                                                                 | Battery charges  
                                                                 | Portable RCDs  
                                                                 | Portable outlet devices  
                                                                 | Isolation transformers |
| Equipment used in workshops, hostile operation environment-Operating condition that are like to result in mechanical damage to the equipment or expose to moisture, heat, vibration, corrosive substances or dust or fumes | Electrical appliance/equipment used in Wet or dusty areas  
                                                                 | Outdoors  
                                                                 | Kitchens  
                                                                 | Laborites with chemical fumes/liquid environment |
could damage the function of the equipment in Workshops.

Note:
New electrical equipment is not necessary to check in accordance with the principle of safe design and manufacture but visual inspection is necessary to ensure that there is no damage occurred during transport. However, if future testing is necessary, then the tag has to incorporate. It is not necessary to test and tagged some equipment such as desktop computers and stationary office equipment as they are permanently located and due to the working environment. Frequent testing of fixed electrical equipment in safe environment is not necessary.

Following are the some of the equipment where testing and tagging is not normally required since they are used in non-hostile operating environment.

1) Desktop computers,
2) Scanners,
3) Photocopiers,
4) Lamps.
5) Radios,
6) Fridges,
7) Freezers etc.
**Annexure 04**

Electrical safety inspection check list

School Name:………
Location/room…………………………………………Date………..

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Action/Situation</th>
<th>Yes</th>
<th>No</th>
<th>Date rectified</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All the circuit breakers in the panel are clearly labeled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Circuit breaker panels are not obstructed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>An emergency power shut off is present</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tested By:………..  Next Date of Inspection:……..
Annexure 05

Maintenance and record keeping of appliances/equipment

School Name……………
Location/room ……………Date of Inspection………

<table>
<thead>
<tr>
<th>Description of the Equip./Appliance</th>
<th>Building &amp; Room No.</th>
<th>Requirem ent of Tag</th>
<th>Visual Inspection</th>
<th>Tested by Instrument</th>
<th>Observatio n</th>
<th>Inspecte d Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tested By:…………… Next Date of Inspection:………
Annexure 06

Register for damage/fail equipment

School Name……………
Location ………………………..Date of Inspection………..

<table>
<thead>
<tr>
<th>Location</th>
<th>Description of the equip.</th>
<th>Danger Tag</th>
<th>comments</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Repair Dispose</td>
</tr>
</tbody>
</table>

Tested By:……….            Next Date of Inspection:……..

NB: Disposal should be done as per government circular