**METRICS**

**Table-**

|  |  |  |  |
| --- | --- | --- | --- |
| **Features** | **Impact** | **Rating (1 – 10)** | **Risk** |
| Room Temperature | Very High Impact | **10** | **The occupants tend to get unhappy in hot conditions and the room temperature must be cooler for preferred thermal comfort.** |
| Relative Humidity | High Impact | **8** | If the RH in a room is at 100%, then the sweat doesn’t evaporate and keeps the whole room very hot. |
| Solar Radiation | Decent Impact | **7** | Again, high intensity solar radiation can cause the rooms to get warm quickly, which comes under thermal discomfort and  Air Conditioners are used in order to cool the room down. |
| Indoor Illuminance | High Impact | **8** | The use of artificial lighting such as fluorescent tubes is very harmful for the environment and consumers a lot of energy as well. |
| Presence/Absence in space | High Impact | **8** | The presence of appliances in rooms is essential but they consume energy and are harmful for the environment, if not used safely. |
| Skin Temperature | High Impact | **8** |  |
| Heart Rate | Very High Impact | **10** | The heart rate tends to increase in hot weather. |
| HVAC System | Very High Impact | **10** | The system consumes a lot of energy and is very expensive.  It causes harm to the ozone layer with the emission of harmful GHG. |
| Light Switch | Very High Impact | **9** | Light Switches carry almost similar risks as HVAC system as they consume a lot of energy in buildings with fewer windows. |
| Shading Position | High Impact | **8** | When shading position comes in to use, the indoor lights are used since the natural light is prevented from entering the room. This leads to switching on indoor lights, which consume electricity. |

|  |  |
| --- | --- |
| Impact | Alternatives |
| It is an important measure in a building environment when considering the thermal comfort of the occupants.  Higher temperature increases the emergency department visits regarding mental health. Cold temperatures decrease negative mental health outcome while how temperature increases negative mental health. | Thermal insulation within rooms can be increased to prevent the escape of thermal energy which results in lower energy consumption. |
| It affects the thermal comfort since higher the RH, the less heat a person will lose and keep them warm.  RH prevents Dry air from causing dry skin. | **Similar to Room Temperature.** |
| It affects the radiant field in the indoor environment and hence it has a remarkable influence on comfort conditions.  If the building has solar panels installed on the roofs, then solar radiation is the best source for generating energy in a cheap and clean manner. | Use of thermal insulation.  Use of window shades. |
| For adequacy and visual comfort.  It comprises of both natural and artificial lighting. | The universities can install LED Bulbs which consume less energy and don’t harm the environment.  The use of proximity sensors is a great way of consuming less energy. |
| The presence of HVAC system in rooms is of upmost importance as it regulates the temperature of the room and keeps the occupant satisfied. |  |
| It’s the temperature of the outermost part of the human body. It prefers cooler conditions. |  |
| Heart rate remains steady when the body is in thermal comfort. |  |
| The Heating Ventilation Air Conditioning System maintains the comfort of the occupants.  It’s the most essential system in campus as it assists by controlling indoor climate and proper airflow and ensures we neither freeze nor sweat.  It consumes 3500W electricity an hour. | Use of thermal insulation.  Installation of solar panels on the roofs of buildings. This will offset some of the peak demand during the day.  Heat Pumps can be used for cooling and heating since they’re more energy efficient and environmentally friendly.  Infrared Heating can be energy efficient but are less effective than HVAC. |
| Light Switching on or off plays a huge factor in thermal comfort of the occupant.  It enables visual comfort in dark rooms or dim-lighted rooms. | **Similar to indoor illuminance.**  Buildings with large window areas can use daylighting control to reduce energy consumption. |
| Shading position can help in blocking outside sunlight from entering the room in case when the outside sunlight is causing discrepancies with the visual comfort. | Use of proximity sensors within the building or install LED lights within the buildings which consume less energy and are environmentally friendly. |