1. Introduction

a. **Green IT: An Overview**

Green IT refers to the study and practice of designing, manufacturing, using, and disposing of computers, servers, and associated subsystems—such as monitors, printers, storage devices, and networking and communications systems—efficiently and effectively with minimal or no impact on the environment.

Green IT is an area of information technology that is still vastly under research. With the advent of information technology, it is becoming increasingly necessary for organizations to reduce their line of business’s impact on the environment, and ensure that the designing, manufacturing, usage and disposition of computer systems used by the organization are done in as much environment friendlier way as possible.

Strict adherence to rules and regulation laid out by the government should also be mandatory. The Ministry of Environment and Forest issued guidelines for environmentally sound management of e-waste under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, in 2008.

Since the advent of Green IT concept, more and more IT firms are coming forward and getting involved in practices that would help them in performing operations that are in-line with Green IT standards.

In 1992, the U.S. Environmental Protection Agency launched Energy Star, a voluntary labeling program that is designed to promote and recognize energy-efficiency in monitors, climate control equipment, and other technologies. This resulted in the widespread adoption of sleep mode among consumer electronics. The term "green computing" was probably coined shortly after the Energy Star program began.

Environmental effects of Computing may be addressed along four paths:
- Green use
- Green disposal
- Green design
- Green manufacturing

b. **Issues in Green Computing**

Following are the issues faced by organizations that follow Green IT practices.

- Data centers generate massive amounts of wasted heat, which could readily be recycled within buildings. None of this will happen quickly unless there is a will.

- The cultural and behavioural challenge within the organisation – for example, encouraging staff to play their part in helping, such as reducing print volumes and using conference calls to reduce unnecessary travel.

- Forward planning to ensure environmental issues are considered when designing and developing new systems. If the legislation changes radically in the future, organizations may find themselves in a compliance battle.

- Sourcing attitudes will need to change with emphasis on ensuring partners and key suppliers are demonstrating their contribution to reducing the impact on the environment. Works being contracted will have to include environmental evaluation criteria.

- Influencing hardware and infrastructure suppliers in the design and manufacture of ICT equipment such that the total environmental cost of ICT can be reduced across the whole supply chain.

- Ensuring that procurement/purchasing departments place the environment at the top of their agendas, by ensuring tendering activities directly take the impact of ICT into consideration.
- Establishing an environmentally-focused organizational culture for staff.

- Changing the traditional way in which your organization does business and utilizes ICT for the benefit of the environment.

- Obtaining priority funding and support for transformational ICT projects that will have a beneficial impact on the environment.

c. **Limitations**

Following are the limitations and challenges faced during the research.

- Organizations may not provide the correct information.

- Once the organization reaches the level of compliance, it might not continue to enhance its green computing model as it has already done what it is supposed to do, and would now prefer to concentrate in its line of business.

- Many green computing procedures are followed more at an ‘employee’ level than the Organization level, hence it is necessary that the employees working in that organization understand the green computing model and what measures can they take from their side to contribute in environment friendly computing.

- An Organization’s willingness to provide data for this project is very imperative, as the organization is in no way obliged to provide the data.