Green Computing projects for students

Rules for project and documentation:

A project should be done based on the objectives of Green Computing. A report of minimum 50 pages should be prepared. The report should have a font size of 12, Times new roman and 1.5-line spacing. The headings should have font size 14. The report should be hard bound.

The project can be done individually or a group of two students.

The students will have to present the project during the examination.

A certified copy of the project report is essential to appear for the examination.

Important Note:

Few of the following projects might seem small, but small is always better than nothing.

The idea behind keeping the project instead of practical's for the green computing subject is that at least to bring some sort of awareness to the students toward saving the environment, energy.

The project done by the students will also bring awareness and may cause to implement good practices in society.

Idea is to start on small scale but aiming towards achieving major impact on society.

The project Ideas:

The list below is to provide guidelines and direction on the kind of projects to be undertaken. These may be adapted by students in consultation with their Project Guides/ Teachers. The purpose of a long list of project ideas is to allow varied choice and avoid duplication of topics in the class.

Carbon footprint:

1. Measuring the carbon footprint of campus.
2. Measuring the carbon footprint, a small MIDC Company.
3. Carbon footprint for FMCG companies
4. CORPORATE CARBON FOOTPRINT AND CARBON NEUTRALITY.
5. Measures to reduce carbon footprint

(For the above topics we can form a small group of students and can assign them the task of the calculating the carbon footprint, for the calculations and things to consider students can refer the measurement tactics given in chapter one.)

Energy Conservation:

1. Plan to Cut Down Your Electricity Bill

(Here every individual student can target the 5 houses nearby its home. Get their last month's electricity bill. From current months onwards suggest the ways for saving the energy to all the peoples in that houses. Continuously whenever possible educate the peoples concerned and guide them on several energy saving ideas. By the end of second month observe the reduction in the electricity bills and present the observations in the form of project report.)

2. Measuring and monitoring use of Power in XXX Company.
3. A survey of steps taken to be energy efficient by Malls / Shopping centers
4. Energy Efficient cooling solutions for homes and offices
5. Electricity Smart Grids and smart energy systems

Recycling:

1. Recycling of IT waste in Colleges
2. Recycling vs Reuse
3. Recycling initiatives taken up by XXX Housing Society: A Case Study
4. Damage caused by improper recycling of e-waste in developing countries like India or China

Paperless:

1. A Case study of a traditional company going paperless with the use of Electronic media
2. Going paperless in Government Departments
3. Challenges in going paperless in Indian Context
4. Economic benefits of going Paperless

Datacenters:

1. Survey of best energy-efficient practices in data centers around the world
2. Designing a datacentre with use of green technology.
3. Design considerations of datacentres for efficient cooling
4. Impact of Datacenters on the environment

Review of Green Initiatives in India and abroad

1. Submitting a small research study on National Mission for a Green India (GIM).
2. Submitting a small research study on Indian Green Building Council (IGBC).
3. Submitting a small research study on The Indian Council of Agricultural Research.
4. Submitting a small research study on LEED INDIA.
5. Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal.
6. Initiatives taken by Europe to reduce the toxic effect of e-waste on environment
7. E Parisaraa - India's First E Waste.
8. WEEE Recycle India - E-Waste Collection Centres in Bangalore.
9. E-waste management rules implemented by Ministry of Electronics & Information Technology by Government of India.

Prototype

1. Build a prototype/Working model of a wind turbine at home.
   (With small amount of money spending students can build a wind turbine that can generate small amount of electricity. There are many ideas and secure steps are available on the internet

regarding this. Under the guidance of the teacher students can prepare the one along with the report stating the procedure and outcome.)

2. Build a prototype/Working model of a simple solar equipment's. Ex. Oven
3. Build a prototype/Working model of Water Purification System.
4. Rain water harvesting model preparation.
5. Creating greywater recycling system.
6. Paper bag making and distributing.
7. (Students can easily make significant number of paper bags and distribute them among the houses nearby and to the hawkers to avoid the plastic bags.)

Any other project that the Teacher/Students fills appropriate for the subject.