

ASSIGNMENT-11

REVIEW ON GRAND CHALLENGES

The Three Grand Challenges I have selected are

1. Make Solar Energy Economical
2. Engineer Better Medicines
3. Engineer the Tools of Scientific Discovery

1. Make Solar Energy Economical

Since Sun is the major energy source that never stop produce the energy Solar Energy is the most significant form of energy.

But this doesn't sound good that it is providing less than 1% power being consumed by the world.

Why is it Important ?

When this question raises the answer is well known that this energy doesn't exhaust like the other fossil fuels which are being used to produce power currently.

How efficient is this technology?

However the solar energy is being produced by various methods , Today commercial solar cells are being manufactured using Silicon which are not that efficient to draw the maximum energy from the sun the better ways are still to be improved.

How do you make solar energy more economical?

This is area is where breakthroughs in the science and technology of solar cell materials can give the greatest impact on the cost and widespread implementation of solar energy.

How do you store solar energy?

This is the major complexity which arises whenever the discussion of mass solar power production raises, though the research is being done better alternatives are about to find.

2.ENGINEER BETTER MEDICINES

Engineers are developing new systems to use genetic information,sense small changes in the body, assess new drugs and deliver vaccines.

A gene is a strand of chemical code, a sort of blueprint for proteins and other substances necessary for life . cells make those molecules according to the genetic blueprints.

Each person's overall blueprint is basically the same, made up of about 3 billion "letters " of code, each letter corresponding to a chemical subunit of DNA molecule. But subtle variants in about 1 percent of our DNA - often the result of just a single chemical letter being different -- give humans their individual identities.

By this genetic information the present research is to develop personalized medicines which are different from one person to others.

Currently facing Challenges in this field are :

- To rapidly assess the patient's genetic problem.
- This assessment should be done in an Inexpensive way
- Research in this field should be done extensively.
- Practical Implementation should be done.

3.Engineer the Tools of Scientific Discovery

In the coming years engineers and scientists should work together for understanding many unanswered questions in nature.

To explore and imagine the human body and Brain in which the Biologists definitely need the help of engineers. That is more advanced tools required by Biologists are yet to be developed which needs engineering help.

There are huge number of quests in the entire universe which only the Biologists or Scientists cannot answer where the Engineering (new tools) is very much important.

Though both Scientists and Engineers are striving continuously their is a necessity of their combined work.Hence it is identified as grandest challenge of this century.