

ATOM 4 PEACE - WIN CONFERENCE 2015

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APPLICATION OF NUCLEAR TECHNOLOGY FOR A BETTER WORLD

INTRODUCTION

SCIENCE → HOW & WHY Things HAPPEN

TECHNOLOGY → MAKING Things HAPPEN

NUCLEAR TECHNOLOGY → Practical application of NUCLEAR Knowledge to improve/better HUMAN life by changing & manipulating HUMAN environment using nuclear technology which may include use of materials, tools, techniques, sources of power etc to make LIFE more pleasant and productive

AIM & OBJECTIVES

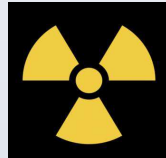
- ❖ Show the importance of nuclear technology
- ❖ Promote the application of nuclear technology
- ❖ Make peaceful application of nuclear technology appreciable

USES OF NUCLEAR TECHNOLOGY

Nuclear Technology; the SPICE of life.

Peaceful application of nuclear technology have several benefits to the world today such as:

- ❖ Food and Agriculture
- ❖ Medicine
- ❖ Industrial
- ❖ Energy
- ❖ Education - Research and Development
- ❖ Environment

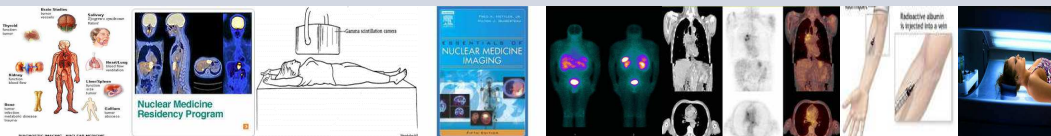


FOOD AND AGRICULTURE



- ❖ Food preservation - irradiation
- ❖ Improved food production - Genetic modification of plant to increase yield
- ❖ Improved crop varieties by using radiation to induce mutation in plant breeding
- ❖ Insect pest control - Best measure because it does not leave poisonous substances on the crop
- ❖ Soil mapping to optimize the efficiency of fertilizers and water (cost Effective)
- ❖ Reduces post-harvest losses - radiation kills bacteria in plants to produce diseases-resistance crops

MEDICINE



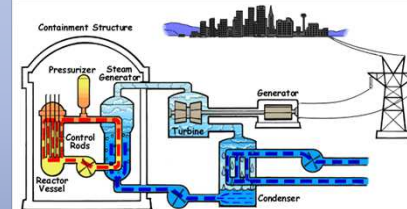
- 1) Treatment of Tumor and Cancerous cells
- 2) Cosmetic surgery
- 3) diagnose clinical conditions in internal organs
- 4) Locate & Identify functional organs
- 5) Broken bones detection
- 6) Radiotracers

INDUSTRIAL



- ❖ Non Destructive Testing (NDT) - oil pipeline joint testing
- ❖ Well logging
- ❖ Removal of toxic pollutants
- ❖ Development and process improvement of measurements, automation and quality control
- ❖ Prerequisite for full automation of high speed production lines - process investigation, mixing, maintenance and wear and corrosion study of plant and machinery
- ❖ Making of plastics and sterilization of single use products
- ❖ Product packaging

ENERGY



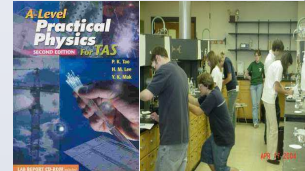
Electricity Generation

ENVIRONMENT



- ❖ Determination pollutant quantity
- ❖ Reduction of environmental & health consequences of large-scale employment of fissile fuel-Greenhouse effect & Acid Rain solution

EDUCATION/RESEARCH



- ❖ Determination of age of materials
- ❖ Experimental Research
- ❖ Laboratory Practical - Students

WAO – WHAT A WORLD WITHOUT RADIATION

Nuclear Technology indeed breeds a BETTER, happy and secured Society. The world revolves round the application of Nuclear Technology for a BETTER living.



NO NUCLEAR - NO HAPPINESS

RADIATION GIVE MEANING TO LIFE