



JIY

COMPETITION FOR THE JUNIOR INVENTOR OF THE YEAR 2020 **INSTITUTION OF ENGINEERS, SRI LANKA**

Above Competition has been organized by the **Institution of Engineers, Sri Lanka** in collaboration with the Ministry of Education for the Sri Lankan youth between the ages 12 – 19 years in order to enhance the creativity and skills of the younger generation.

1. Introduction

1.1 What is a New Invention?

A new invention is the creation and introduction of some product, appliance or a concept that is not in use at present.

1.1.1. New Invention

A new invention is the designing, processing and introducing a new product or technique, made on a basic concept that is not in existence at present.

1.1.2. New Innovative Design

An innovative design differs from a new invention. An innovative design is defined as the building of a entirely new product having thoroughly studied the existing designs, appliances or techniques and functions they fulfill to meet the needs of the society. This must not be a replica of an existing design of a product.

1.2. The method of presenting a New Invention

1.2.1. Basic Design

This means an invention that demonstrates all its main aspects built to full scale. It could either be a working unit or a non working unit.

1.2.2. Working Model

This is a scaled model of an invention that works in the same way as the basic design.

1.2.3. Model that can be made to function

Like the working model, even if the model is not working, it could be used to exhibit basic functions of a working model.

2. Instructions for applications

- 2.1. Applications and all details pertaining to this competition can be obtained from the website www.iesl.lk or by sending an email to ed@slt.net.lk, jiy.iesl@gmail.com.

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The Institution of Engineers, Sri Lanka,
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- 2.2. Completed application forms including the details of the invention or innovation presented should be sent to the address mentioned in (2.1.) above, before 30th June 2020. Details of the object (innovation) and its functions with diagrams should be presented in A4 size papers. Applications without such details will be rejected from the competition. If there are any revisions to the invention or innovation suggested, they can be made even after it is presented. However, when the final invention is presented, relevant revision details should be sent along with it.

Students are encouraged to download the regulations and applications from www.iesl.lk and to submit via email to IESL by using ed@slt.net.lk & jiy.iesl@gmail.com

Further, with the final invention a log book endorsed with experiments, observations, results and obstructions that cropped up during the invention should be submitted.

- 2.3 Students may also apply as a team or individual. A team shall not exceed three number of members. For team innovations, each member should fill J1 application form and one J2 application form to be submitted.

3. The basis of instructions and evaluation of the invention.

3.1. Instructions regarding an invention.

- The invention presented should preferably be simple.
- The invention should be useful and fulfill a social need.
- The invention should be strong in all respects.

- Except the bearings, motors and electronic parts, all other parts must be inventions of the applicant.
- Welding and bracing could be used only in places where it is absolutely necessary.
- Explosive material or other destructive substances should not be used.
- Products should not rise threat to any being
- Models and copies of existing objects and working processes will not be accepted as inventions or innovation.
- Any products borrowed from the Internet should be so stated and should undergo prominent modifications to avoid its being a copy of the borrowed product. It is advised to borrow only the idea and innovate a new product.

3.2. Basis of evaluation of inventions

Special attention will be paid to the following principles in evaluating new inventions and innovations presented to the competition

- Novelty of the invention presented.
- Correctness of design.
- Use of instruments and techniques to maximize results.
- Use of environmental friendly objects and materials.
- Methods used in energy conservation.
- Final invention.

3.3. Hints for New Inventions

- Appliances that help work at home, kitchen and garden, make simpler and efficient.
- Appliances that save energy.
- Mechanisms that ensure personal protection and degree of fool-proof operation.
- Introduction / integration of methods/ techniques to the appliances that improve efficiency.
- Use of new appliances associated with environmental protection processes.
- Products done using local raw material (that promotes re-cycling).
- Any items or a methodology to assist the wellbeing of physically handicapped person
- It is advised to make proto type product and test the idea or design before making the final product.

3.4. Reasons to Reject Applications

- Products using explosives and other destructive materials.
- Modeling of existing products and processes.
- Products that can cause harm to humans and animals

It has been organized to hold workshops for all applicants in respect of new inventions. Further details will be informed later.

4. Competition Time Table

- Competitions at provincial level – July & August 2020
- Final Competition – September 2020

5. Awards

- Following awards will be presented to the winners.
 - **1st Place** The esteemed title of 'Junior Inventor of the Year', Cash Prize of Rs. 20,000/=, a Gold Medal and a Certificate.
 - **2nd Place** Cash Prize of Rs. 17,500/=, a Silver medal and a Certificate.
 - **3rdPlace** Cash Prize of Rs. 15,000/=, a Bronze Medal and a Certificate
- The winners of the competition for innovations in the following areas will receive the prices below.
 - Appliances that help work at home, kitchen and garden, make simpler and efficient.
 - Appliances that save energy.
 - Mechanisms that ensure personal safety and degree of fool-proof operation.
 - Introduction/ integration of methods/ techniques to the appliances that improve efficiency.
 - Products that promotes environmental friendly process.
 - Products done using local raw material.
 - The best team innovation.
 - **1st Place - Cash Prize of Rs. 7,000/=, a Gold Medal and a Certificate.**
 - **2nd Place - Cash Prize of Rs. 6,000/=, a Silver medal and a Certificate.**
 - **3rd Place - Cash Prize of Rs. 5,000/=, a Bronze Medal and a Certificate**
- Scholarships will be awarded to five selected winners to cover the expenses until the end of University education.
- Ten selected the winners will be given a research internship at the University of Moratuwa.
- If the winner is studying in a school, the IESL Challenge Cup with a Cash Prize will be awarded to the school.
- The best teacher who is recognized to have provided the guidance for participants in this competition will be awarded special certificate and a monetary price.

JIY Winners who received international recognition are given below.

JIY WINNERS 2007

Yasith Kanchana Lokuge - Colombo

- Intel ISEF 2008 Finalist - Atlanta, USA
- Herbert Hoover Medal - International Exhibition for Young Inventors
 - Award for Mechanical Structural Design - Silver
 - Award for Safety & Healthy Enhancement - Bronze

Sajeewa Dinesh Hendurugoda- Kandy

- Intel ISEF 2008 Finalist - Atlanta, USA

JIY WINNERS 2008

Chandula Padmasiri - Colombo

- Intel ISEF Grand Award - Third place

Janith Kalpa Gunarathna - Colombo

- National Society of Professional Engineers, USA Award

Ganindu Nanayakkara - Colombo

- National Society of Professional Engineers, USA Award

Jayasanka Dushan Abayaprema - Colombo

- Intel Excellence Award

Chaga Thejo Bandara Edirisinghe - Gampaha

- Yale Science & Engineering Associatio Award

JIY WINNERS 2009

Ganindu Nanayakkara- Colombo

- Intel ISEF Grand Award
- Intel excellence Award
- China Association for Science & Technology Award
- Symantec Corporation Award
- National Collegiate Inventors & Innovators Alliance/The Lemelson Foundation Award

Maduranga Karunajeewa - Ruwanwella

- Intel ISEF Finalist
- Presidential award winner (Transport category)-SLIC

JIY winners 2010

Timira Shanuka Thilakarathne - Veyangoda

- Intel ISEF Finalist
- Intel excellence Award in Computer Science

Aruna Prasad Keerthirathne - Kandy

- Intel ISEF Finalist

JIY winners 2011

Nipuna Kavishka Silva , Pipunika Vimanthi Silva - Kandana

- IEEE Award



- Intel ISEF Finalist
 - Intel excellence Award in Computer Science
- Chathura Saman Kumara - Ruwanwella
- Intel ISEF Finalist

JIY winners 2012

- Pubudu Dinesh Kapuge - Mihinthale
- Intel ISEF Grand Award-Electrical & Mechanical Engineering – 1st Place
 - Special award from the Ashtavadhani Vidwan Ambati Subbaraya Chetty Foundation
- Pasindu Chathuranga Wijesena- Colombo
- Intel ISEF Finalist

JIY winners 2013

- Namal Udara Piyasiri - Thambutthegama
- Intel ISEF Grand Award-Electrical & Mechanical Engineering -2nd Place - \$1,500
 - Special award from the American Intellectual Property Law Association- \$1,000
 - Special award from U.S. Agency for International Development - \$10,000
- Nipun Kavishka Silva - Kandana
- Intel ISEF Grand Award - Computer Science - 4th Place - \$500

JIY winners 2014

- Sanju Subodha Sewwandi - Kaduwela
- Intel ISEF Grand Award - Engineering Mechanics - 4th Place - \$500
- Mahendiran Sivatharshan – Jaffna
- Intel ISEF Finalist

JIY winners 2015

- Abishek Stenush Gomes - Wellawaththa
- Intel ISEF Grand Award – Embedded Systems – 3rd Place - \$100
 - Special award from the Synaptics incorporated- \$2,000
 - Special award first place from the Patent and Trademark Office Society - \$500
- Chamindu Jayasanka - Hanwella
- Special award top place from the Patent and Trademark Office Society - \$1,000

JIY winners 2016

- Wishwajith Gangodawila - Narammala - Intel ISEF Grand Award – Engineering Mechanic – 4th Place
- Sanuja Udantha Abeywickrama - Ambalangoda
- Intel ISEF Finalist

JIY winners 2017

- G Kavinda Bandara & K Gimhan Wijayawardana
- Intel ISEF Grand Award - Embedded Systems - 4th Place
- Supun Sashipriya Silva - Kandana
- Intel ISEF Finalist



JIY winners 2018

Kavin Budwin Udapola - Sandalankawa

- Intel ISEF Grand Award - Embedded Systems - 3rd Place

Mohomed Ayyash - Mawanella

-Intel ISEF Finalist

- First three winners and category winners will receive their medals, certificates and prizes from the chief guest of the annual sessions 2020 of the Institution of Engineers, Sri Lanka. Other winners will receive their prizes and certificates from the chief guest of Techno exhibition.
- The winners will get an opportunity to display their inventions at the National Engineering Exhibition Techno 2020 that will be held at the Bandaranaike Memorial International Conference Hall in October 2020.

6. Regulations

6.1. This Competition will be open to all Sri Lanka students who are under 19 years of age as on 30th June 2020.

6.2. Every possible endeavor should be made to present a new invention. An invention presented to a competition organized by this Institution or a competition organized by another Institution will be accepted only if it has been considerably improved subsequently and an award is not received for it.

A declaration to this effect should be submitted with a clear description with details of the invention and the subsequent improvements in detail.

6.3. Supportive evidence should be presented to prove that the basic idea and the invention is an effort of the inventor himself. However this will not hamper the assistance sought from the elders.

6.4. A duplicate of a product that is in the market at present with minor changes will not be accepted for the competition.

6.5. Inventions presented repeatedly for the same purpose are shown below.
Presentation of such inventions will be disadvantageous to the competitor.

- Poles with hooks to pluck fruits
- A model of an existing vehicle or machine
- Day today electronic circuits
- Strainer/ sieve of sand or flour.

- Mechanical appliances for removing cobwebs
 - Water level controller
- 6.6.** The conditions and rules of the competition will be changed at the discretion of the Institution. Such changes will be notified to the competitors.
- 6.7.** If an award-winning invention of JIY competition is exhibited in another competition / exhibition a sign board of 20cm x 10cm in size should be displayed along with it, stating that it has been presented to the Junior Inventor of the Year competition organized by the Institution of Engineers, Sri Lanka, and has won respective award of that year. This presentation should only be done by the winner himself ONLY, with the written approval of IESL.
- 6.8.** In case a person who has received an award is discovered subsequently to have violated a condition or a rule of the competition even after completion of the competition, he will be required to return all awards, prizes and certificates and will be debarred from appearing for any other competition organized by the institution.
- 6.9.** JIY committee does not recommend spending large amount of money on the projects. Under any circumstances the committee or the judges will not be liable to consider the monetary value of the project for evaluation.
- 6.10.** The competitors should strictly abide by the conditions and rules of the competition. If they do not comply, they will not be qualified to enter the competition. The decision of the institution with regard to the awards of the competition will be final.