



# J I Y

## **COMPETITION FOR THE JUNIOR INVENTOR OF THE YEAR 2017** **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](http://www.iesl.lk) or by sending an email to [ed@slt.net.lk](mailto:ed@slt.net.lk), [jiv.iesl@gmail.com](mailto:jiv.iesl@gmail.com).

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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 31<sup>st</sup> May 2017. 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](http://www.iesl.lk) and to submit via email to IESL by using [ed@slt.net.lk](mailto:ed@slt.net.lk) & [jiv.iesl@gmail.com](mailto:jiv.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.

## 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.



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- 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.

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 – June, July, August 2017
- Final Competition – September 2017

## 5. Awards

- Following awards will be presented to the winners.
  - **1<sup>st</sup> Place**      **The esteemed title of ‘Junior Inventor of the Year’, Cash Prize of Rs. 15,000/=, a Gold Medal and a Certificate.**
  - **2<sup>nd</sup> Place**      **Cash Prize of Rs. 12,500/=, a Silver medal and a Certificate.**
  - **3<sup>rd</sup> Place**      **Cash Prize of Rs. 10,000/=, 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 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).
  - The best team innovation.
    - **1st Place - Cash Prize of Rs. 5,000/=, a Gold Medal and a Certificate.**
    - **2nd Place - Cash Prize of Rs. 4,000/=, a Silver medal and a Certificate.**
    - **3rd Place - Cash Prize of Rs. 3,000/=, 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.
- Winners of this competition will get an opportunity to participate at the **Sri Lanka Science & Engineering Fair (SLSEF)** organized by MOE, IESL, NSF and Intel in January 2018. In addition to SLSEF, the winners will be eligible to participate in the prestigious science and engineering competition, **Intel International Science and Engineering Fair (Intel ISEF)** organized by the “Intel” company of USA in May 2018. The prizes worth four Million US Dollars will be distributed over the winners of this competition.

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 Association 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
- Samith Ashan Jayaniwasa - Matara
  - National Society of Professional Engineers, USA Award
- Kalani Jayareka - Ratnapura
  - Yale Science & Engineering Association Award
- Aruna Prasad Keerthiratna - Kandy
  - U. S. Metric Association Award
- Chaturanga Ratnayake - Polonnaruwa
  - Ricoh Americas Corporation (Sustainable Development) Award

### **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 – 1<sup>st</sup> 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 -2<sup>nd</sup> Place
  - Special award from the American Intellectual Property Law Association
  - Special award from U.S. Agency for International Development
- Nipun Kavishka Silva - Kandana
- Intel ISEF Grand Award- Computer Science - 4<sup>th</sup> Place

### **JIY winners 2014**

- Sanju Subodha Sewwandi – Kaduwela
- Intel ISEF Grand Award-Electrical & Mechanical Engineering - 4<sup>th</sup> Place
- Mahendiran Sivatharshan – Jaffna
- Intel ISEF Finalist

### **JIY winners 2015**

- Abishek S Gomes – Wellawaththa
- Intel ISEF Grand Award – Embedded Systems – 3<sup>rd</sup> Place
  - Special award from the Synaptics incorporated
  - Special award first place from the Patent and Trademark Office Society
- Chamindu Jayasanka - Hanwella
- Special award top place from the Patent and Trademark Society

- First three winners and category winners will receive their medals, certificates and prizes from the chief guest of the annual sessions 2017 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 2017, that will be held at the Bandaranaike Memorial International Conference Hall in October 2017.
- The winners who participate for competition of Intel International Science and Engineering fair and the top ten winners of the competition will be offered a scholarship to follow the engineering courses at College of Engineering, IESL.

## 6. Regulations

**6.1.** This Competition will be open to all Sri Lanka students who are under 19 years of age as on 31<sup>st</sup> May 2017.

**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 machine
- Inventions consisting completely standard electronic circuits
- Strainer/ sieve of sand or flour.
- Mechanical appliances for removing cobwebs
- Water level controller



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- 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.