

Intramural round December 4-10, Agra, India

## Extramural Round Problems

### VIII International Natural Sciences Tournament

December 4-10 | Dr. Bhimrao Ambedkar University | Agra, India

#### 1. Clothes of the future

One of the drawbacks of various portable electronic devices is low accumulator capacity, while charging with the help of the power grid is not always available. Currently, clothes, which transform energy from the human body (movement, heat) and alternative energy sources (wind, sun) into electric energy, are being actively developed. Propose your own concept of clothes or accessories, which would effectively transform the energy of human heat or movement or any other sources of energy resulting from human activities, into electricity. The proposed clothes must be comfortable, should have a reasonable price and should be able to charge the accumulators of any common portable electronic devices.

#### 2. Love potion

Every year more species of animals comes to the edge of extinction. For example, at the moment there exist only three living representatives of such species as northern white rhinoceros: one male and two females. The attempts of breeding such animals in captivity often fail, and the living couple of animals may not want to breed for any reason. Not only preserving of species is important, but also preserving of natural behavioral features of each species during breeding. Propose a nonviolent general approach, which could make possible natural breeding of rare species.

#### 3. Taj Mahal

Contemporary India is a blend of unique culture, centuries-old traditions, and modern technologies. However, as any rapidly developing country, it has some unsolved problems. In the city of Agra, stands the oldest cultural monument -- the Taj Mahal. In recent years, yellow pollution stains started to develop on the snow-white cupola and the upper part of facade. Currently, government approaches the problem using a so-called "mud-pack" method, which has significant disadvantages. Propose a new method for removing this yellow staining from the Taj Mahal building envelope, as well as a long-term staining protection method.

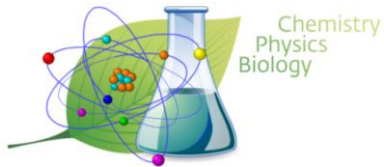
---

The Tournament consists of extramural and intramural rounds. To participate in the extramural round the team should send clear and outstanding solutions of all the extramural round problems before September 15, 2017. Each solution consists of:

1. presentation (\*.ppt, \*.pdf);
2. extended solution (\*.doc) – 5 pages or less.

The solutions should be sent before the deadline via account on the website [www.scitourn.com/account](http://www.scitourn.com/account).

# International Natural Sciences Tournament



*International Natural Sciences Tournament, 2010-2017*

*[www.scitourn.com](http://www.scitourn.com)*

participants@scitourn.com | skype: scitourn | twitter: @scitourn



Intramural round December 4-10, Agra, India

If you have any questions in regard to the presented information, please, do not hesitate to contact us again by:

- e-mail: [participants@scitourn.com](mailto:participants@scitourn.com);
- WhatsApp: + 7 981 740 68 54;
- Skype: vera\_suns

Please, remember the following notes:

- participation in the extramural round is free of charge;
- participation fee for the intramural round is 1000 US Dollars. This will provide a team of 5 members and its coach accommodation for the intramural round days of the Tournament;

Follow us on Facebook:

<https://www.facebook.com/scitourn>.

Read us in Twitter: @scitourn