**CBSE REGIONAL LEVEL SCIENCE EXHIBITION – 2018-19**

**Exhibit II**

**Title: Regenerative Carpet**

**Under Theme: Scientific Solutions for Challenges in Life**

**Subtheme: Resource Management**

**Objective / Aim:** The aim of the project is to conserve electricity, supply electrical energy free of cost and harness energy delivered to the ground by a person while walking. This energy is used to turn the axles of the dynamos which make electricity.

**Scientific Principle Involved:** Electromagnetic Induction.

**Material used:** Springs…………………… 24 No.

DC Generators…………………. 6 No.

Gear Wheels and Rails……….. 6 No.

Wooden Plank…………………..2 No.

L.E.D………………………………90 No.

**Working /Investigation/ Findings**: As soon as a person steps over the mat, the fixed rail goes down and turns the axle of the DC generator. The springs get compressed and store the potential energy. When the foot is no longer over the mat, the springs use this potential energy to set the mat back on its place, preventing any discomfort to the person walking over it.

**Approximate cost incurred and time spent: Around Rs. 800 and time 3 - 4 days**

**Utility and further scope of the project:**

* This platform can be installed in areas of heavy footfall like Metro stations, Railway Platforms, Airports, and Skywalks etc.
* It is very cost efficient and is made up of discarded material. It is an Up-cycled project

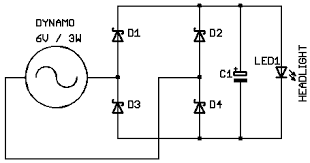
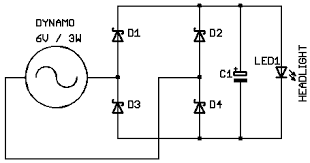
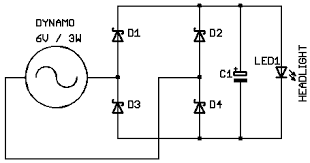
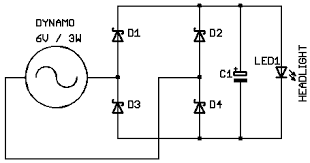
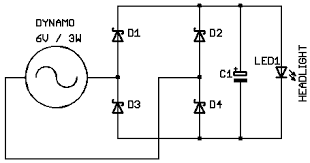
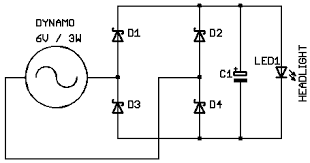
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* It can be installed in homes as well due to low installation and maintenance costs.
* It can be fitted with devices like current amplifiers to run appliances with heavy power requirements.

**Books / Websites referred:** [www.wikipedia.com](http://www.wikipedia.com/)

[www.studyrankers.com](http://www.studyrankers.com/)

**Figure/diagrammatic representation:**

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L.E.D.s and dynamos in simple electric circuit.