



MGM's  
POLYTECHNIC

CIVIL ENGINEERING  
DEPARTMENT

SPECIAL POINTS  
OF INTEREST:

- Students Results
- Faculties Achievements
- Industrial Visits
- Lecture Talks by Professionals



# अथापत्थ

A NEWS LETTER OF CIVIL DEPARTMENT

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## MSBTE Academic Result Summer 2019

Maharashtra State Board of Technical Education (MSBTE) has conducted the Summer 2019 Examination in month of May June 2019. For this Examination from our department Two Seventy students was appeared. The overall result of department was 75.00 % for the Summer 2019 examination.



## Topper Students of Department

### FIRST YEAR

- 1) Wadhvani Sahil 87.26%
- 2) Shashimahal Sakshi 84.00%
- 3) Pardeshi Nikita 82.95%

### SECOND YEAR

- 1) Zinzurde Neha 85.88 %
- 2) Ghugare Shantanu 85.00 %
- 3) Chavan Snehal 84.75 %

### THIRD YEAR

- 1) Pathan Mujahid 91.70 %
- 2) Khamgaonkar Gayatri 90 %
- 3) Wankhede Pooja 89.58 %



**Prof. Salve U. L.**  
M. E. (Structures)  
Head of Department



**Prof. Shaikh S. J.**  
M. E. (Structures)  
Lecturer



**Prof. Toshniwal S. S.**  
B. E. (Civil)  
Lecturer

## Assessment of Solid Waste Management for Aurangabad City- Challenges and Solution

*Aurangabad Municipal Corporation (AMC) disposes its waste at exhausted landfill at Naregaon (8.9 ha) which is about 5km from city. Considering the exhaust condition on Naregaon landfill, municipality planners are searching for another land in the vicinity but in vain due to severe oppose from local people. Motivated by Aurangabad Municipal Corporation in developing the city, this paper tries to find the suitable landfill sites using multi criteria decision analysis, overlay analysis of Geographic Information System (GIS) and Site Suitability. Solid waste if not handled properly badly affects the environment. The waste has potential to pose threat to land air and soil. The poor solid waste management leads to social, economical, health and environmental problems. Aurangabad is famous for being tourist city of the Maharashtra state. The problems associated with solid waste management in the city of Aurangabad require immediate attention and action. At the surface the reasons for improper solid waste management include growing population and city. However these are only few of the causes. The paper presents the status of solid waste management and treatment practices in Aurangabad city.*

## Survey on Smart and Efficient Transportation (Use of Solar Panels on Highways)

*The Solar Roadway is a series of structurally-engineered solar panels that are driven upon. The idea is to replace all current petroleum-based asphalt roads, parking lots, and driveways with Solar Road Panels that collect energy to be used by our homes and businesses. The renewable energy generated by solar road panels will replace the current need for fossil fuel which is used for generation of electricity as also oil used for driving the vehicles which in turn reduces the greenhouse gases nearly to half. The implementation of Solar Roadways Technology will create the clean energy boom, spurring private investment on a massive scale, with relatively little extra cost. An intelligent highway infrastructure and a self-healing decentralized power grid that will eliminate our need for fossil fuels. Solar Roadways will*

## Non Linear Dynamic Analysis of Regular Shaped & L-Shaped Building

*Earthquake is one of the very important aspects to be considered while designing every structure. Lot of work has been reported by many researchers who worked to study the effect of structures with Different irregularities. By inspiring from their works the project is done using time history analysis in E Tabs 2015. In this paper two models of rectangular shape and L-shape each of G+5 are taken for analysis. Both the buildings are assumed to be in Zone V and having medium soil type. The previous Elcentro earthquake 1940 data has been take for analysis. For this analysis listed parameters are considered namely Maximum displacement and drift, Base shear, Maximum story acceleration and Time period. It is observed that Irregular shaped building leads to increase in displacement, drift, story acceleration, time period and member forces, but reduces the base shear.*



**Prof. Bhutekar S. B.  
M. E. (Structures)  
Lecturer**

### **Replacement of Natural Coarse Aggregate by Industrial Steel Slag In Road Construction**

*Due to growing environmental awareness, as well as stricter regulations on managing industrial waste, the world is increasingly turning to researching properties of industrial waste and finding solutions on using its valuable component parts so that those might be used as secondary raw material in other industrial branches. Although steel slag is yet considered a waste and is categorized in industrial waste catalogues in most countries in the world, it is most definitely not waste, neither by its physical and chemical properties not according to data on its use as valuable material for different purposes. Moreover, since the earliest times of the discovery and development of processes of steel and other metals production, slag as by-product and is used for satisfying diverse human needs, from the production of agricultural and agro-technical agents to production of construction elements. This study demonstrates the possibilities of use of*



**Prof. Bhutekar S. B.  
M. E. (Structures)  
Lecturer**

### **Utilization of Waste Plastic in Manufacturing of Paver Blocks**

*Concrete is the most widely used construction material in the world. Using waste and recycled materials in concrete mixes for paver blocks becoming increasingly important to manage and treat both the solid waste generated by industry and municipal waste. These blocks were rectangular in shape and had more or less the same size as the bricks. During the previous five decades, the block shape has relentlessly developed from non-interlocking to somewhat interlocking to completely interlocking to multiple interlocking shapes. Use of plastic waste which is non biodegradable is rapidly growing in the surroundings and becoming threat to environment in many aspects. This study demonstrates use of waste plastic for manufacturing the concrete paver blocks and with this efficient disposal way of plastic waste is possible.*

### **Experimental Study on Stabilization of Expansive Soil Using Steel Slag and Bitumen Emulsion**

*In this project the strength of soil is increased by adding steel slag, bitumen and both steel slag and bitumen emulsion instead of replacing with stronger soil. The initial strength of the soil is determined by conducting soil tests such as specific gravity, plastic limit, liquid limit, standard proctor compaction test, unconfined compressive strength and California bearing ratio tests. The steel slag used in two sizes less than 4.75mm and size between 4.75mm to 10mm which is known as Steel Slag type A and B. The results obtained are then compared with the soil treated with 5%, 10%, 15%, 20% and 25% of steel slag. Also the results obtained are then compared with the soil treated with 2.5%, 5%, 7.5%, 10%, 12.5% of bitumen emulsion. Further the optimum percentage of steel slag of both types and bitumen emulsion is mixed with soil together with different combination.*



**Prof. Vaijwade S. M.  
B. E. (Civil)  
Lecturer**

# Industrial Visits



**Visit to Transfer Station with Third year Students on 20.12.2018**



**Visit to Railway Over Bridge with First year Students on 21.02.2019**

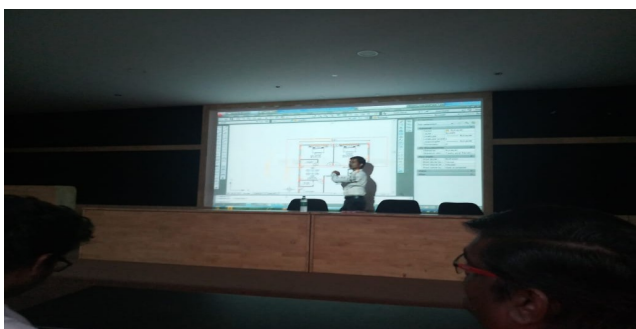


**Visit to Railway Jayakwadi Dam with Second year Students on 16.01.2019**



**Visit to Radhai Organic, Borgaon with Third year Students on 08.02.2019**

# Lecture Talks by Professionals



**Lecture Talk arranged for Third year students on RCC Design on 18.01.2019**



**Lecture Talk arranged for Second year students on Building Planning on 22.02.2019**



**Personality Development Workshop arranged for Second and Third year students on 11.01.2019**

*“A person who never made a mistake never tried anything new....”*

News Letter Created by Prof. Salve U. L.