

# SOCIAL RELEVANT PROJECT

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**Some innovative projects presented by Civil Engg. Department**

## **CIVIL DEPARTMENT**

### **Performance Study of Laterite Soil Treated With Ground Granulated Blast Furnace Slag (GGBS)**

*This study brings out the effect of addition of 0%, 5%, 10%, 15%, 20% of blast furnace slag in order to stabilize the laterite soil. The blast furnace slag is collected from Jojobera Cement Plant, Jamshedpur, and the Laterite soil is collected from Gunjam District of Orissa. Its consistency properties, compaction properties, and strength parameter are investigated with addition of blast furnace slag and compared with that of the virgin Laterite soil. The overall testing program was conducted in two phases. In the first phase, the index properties of the laterite soil were studied by conducting Specific Gravity, Atterberg Limit, Wet Sieve analysis, Hydrometer, Light compaction test, and unconfined compression strength test etc. In the second phase of the test program, ground granulated blast furnace slag(GGBS) were mixed as 0%, 5%, 10%, 15%, and 20% with dry weight of red soil and then tested. To analyze the curing effect, particular CBR and UCS samples were cured for 3, 7, 14 days with ambient temperature under constant moisture content. The results have been compared with previous researcher's work. It shows that there is a fairly good agreement of the authors results with the researcher's work.*

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