

ANJUMAN ENGINEERING COLLEGE (FOR MEN)

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A PROJECT REPORT ON

“STUDY OF PROPERTIES OF LETHAMARGIC SOIL OF BHATKAL REGION AND ITS STRENGTH IMPROVEMENT TECHNIQUES”

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF BACHELOR OF
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ABSTRACT

Lethamargic- Shedi soil strata is very common throughout west coast of India from Malbar (Kerala) to Ratnagiri in Maharashtra wherever laterite soils are found. Lethamargic soils are considered to be “treacherous soil” by geotechnical engineers due to its low strength and its unpredictable behaviour. There is not much study on this type of soil and this has added to the difficulty in designing structures in lethamagic soil stratum.

The project work involves study on engineering behaviour of lethamargic soil of west coast of India especially in Bhatkal area with field and laboratory investigation. Laboratory investigation was carried out to find the classification of soil of the Bhatkal area. The test on engineering property and Atterberg’s limits indicates the strength of the soil for some extent. This result shows that Lethamargic soil is considered to be a weaker soil. The lethamargic soil strata are existing at considered depths below ground level. This layer is formed from lateritic soil by some chemical action of ground water (water table). It does not possess any desirable engineering property and its behaviour is unpredictable.

This project work also aims at improving its engineering property by suitable treatment. Some other organic chemicals like fly ash, bio-chemicals etc can be used to change engineering properties of lethamargic soil. In this project work efforts have been made to improve the strength characteristics using ingredients like coir and lime and the obtained results are good to practise in pavement construction.