

**NUMERICAL SIMULATION OF GROUND TEMPERATURE VARIATION FOR TIME  
VARIANT BOUNDARY CONDITION**

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**ABSTRACT** This paper aims to predict ground temperature variation with depth for time variant ambient air temperature and solar radiation data for Jamshedpur, India. Finite difference method has been used to discretise computational domain and explicit scheme has been employed to determine numerical solution. Numerical results have been validated with experimental measurement of ground temperature. Diurnal temperature variation for the hottest and the coldest day and annual variation for the year 2016 have been computed. The diurnal temperature variation is found up to 0.3m depth of soil whereas annual temperature variation is up to 3m depth.