

PROBABILITY ANALYSIS FOR PREDICTION OF ANNUAL MAXIMUM RAINFALL OF ONE TO SEVEN CONSECUTIVE DAYS FOR AMBEDKAR NAGAR UTTAR PRADESH

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ABSTRACT

The present study was conducted for probability analysis of previous 20 years (1993-2012) with the prime objective for the prediction of annual maximum rainfall of one to five consecutive days of Ambedkar Nagar (Tanda). The observed values were computed by wei-bull's formula. The maximum rainfall values were estimated by proposed predicted models viz. Gumbel, Log Pearson Type III Log Normal and Gamma. The predicted and observed values were also established. The rainfall data has been in the above distributions and their corresponding rainfall events were estimated at 9.52, 23.81, 47.62 and 95.24 percent probabilities level. The goodness of fit models was tested by Chi-square formula proposed by Hogg and Tanis. The comparison between the measured and predicted maximum value of rainfall clearly shows that the developed model can be efficiently used for the prediction of rainfall. The statistical comparison by Chi-square test for goodness of fit clearly indicates that the Log normal distribution was found to be best model for prediction by Gumbel distribution shows very close relation to be observed rainfall for two consecutive day's annual maximum rainfall (mm).

KEYWORDS: Log Pearson Type III Log, prime objective & Chi-square test

Original Article

Received: Dec 10, 2015; **Accepted:** Dec 21, 2015; **Published:** Dec 29, 2015; **Paper Id.:** IJASRFEB20167