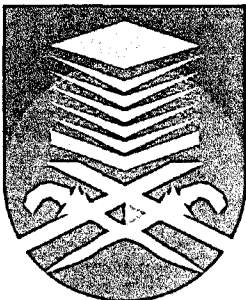


SHUFFLED FROG LEAPING ALGORITHM (SFLA) FOR SOLVING PROFIT  
BASED UNIT COMMITMENT PROBLEM

This thesis is presented in partial fulfilment of the requirement for the award of the  
Bachelor of Engineering (Hons.) Electrical Engineering



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## ABSTRACT

This thesis presents the Shuffled Frog Leaping Algorithm (SFLA) technique is used to solve the Profit Based Unit Commitment Problem (PBUCP). The main purpose for solving this problem is to boost the Generation Companies (GENCOs) profit. PBUC problem depends on the right demand constraint and allocates fixed and transitional costs to the scheduled hours. GENCOs will reconstruct the operation system by scheduling their generators with the purpose to maximize their profit and minimize the cost. The proposed SFLA method is tested on a test system with ten generator units for a period of 24 hours. The results show that SFLA method can provide the solution for PBUCP.

*Keywords - Profit Based Unit Commitment (PBUC), Shuffled Frog Leaping Algorithm (SFLA)*

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