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Timetabling Communities' Demands for an Effective Examination Timetabling Using Integer Linear Programming

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Abstract : This paper explains the educational timetabling problem, a type of scheduling problem that is considered as one of the most challenging problem in optimization and operational research. The university examination timetabling problem (UETP), which involves assigning a set number of exams into a set number of timeslots whilst fulfilling all required conditions, has been widely investigated. The limitation of available timeslots and resources with the increasing number of examinations are the main reasons in the difficulty of solving this problem. Dynamical change in the examination scheduling system adds up the complication particularly in coping up with the demand and new requirements by the communities. Our objective is to investigate these demands and requirements with subjects taken from Universiti Malaysia Terengganu (UMT), through questionnaires. Integer linear programming model which reflects the preferences obtained to produce an effective examination timetabling was formed.

Keywords : demands, educational timetabling, integer linear programming, scheduling, university examination timetabling problem (UETP)
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